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1985 PAPER MERCHANT PERFORMANCE

PAPER MERCHANT PERFORMANCE FOR THE YEAR 1984

NATIONAL PAPER TRADE ASSOCIATION, inc.
1985

PAPER MERCHANT PERFORMANCE
FOR THE YEAR 1984

PAPER MERCHANT PERFORMANCE TRENDS FOR THE YEARS 1975-1984

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NATIONAL PAPER TRADE ASSOCIATION, INC.

111 GREAT NECK ROAD

GREAT NECK, NEW YORK 11021

ONE HUNDRED THIRTY FIVE DOLLARS

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INTRODUCTION:
PAPER MERCHANT PERFORMANCE FOR THE YEAR 1984

Paper Merchant Performance for the year 1984 reports the results of a survey of the operations of participating members of the National Paper Trade Association (NPTA) for the calendar year 1984. The survey was designed by the Management Information Committee of the NPTA and Management Foresight, Inc. (MFI) of Columbus, Ohio. Confidential survey forms were sent directly to MFI by participating firms. MFI then checked and cleaned up the data and produced confidential, individual company reports and *Industry Performance Surveys* (IPS). The information appearing here has been derived from the IPS. This is the eighth consecutive year in which MFI produced the survey for the NPTA.

This edition of *Paper Merchant Performance* reports merchant performance information from 1974 - 84. The text of this report is organized into four chapters according to commodity groupings that are explained in each chapter.

203 firms, regional divisions and/or branches submitted survey forms. The participating firms represented over $7 billion dollars in 1984 sales. (See Appendix A for sales characteristics of the participants).

As in the past, each survey participant received a confidential, individualized Performance Analysis Report (PAR) which compared that firm's performance to the performances of similar groups of firms in the industry. Each PAR contains extensive operational and performance results for the individual firm and for the industry.

The report is organized into four chapters, by type commodity sold:

1) Overall Paper Merchant Performance and Personnel Productivity
2) Printing Paper Merchant Performance
3) Industrial Paper Merchant Performance
4) Dual Paper Merchant Performance

Most financial performance measures in the exhibits and tables are in the form of "composite means" with a smaller number expressed in "medians" and "weighted means". These are defined in more detail in the appendix.

Last year's and this year's report include a new section covering personnel productivity trends over the past several years, with special emphasis on sales compensation data. A large number of NPTA members have requested this information and hopefully this addition will be valuable to them.

The basic format for each chapter is a presentation and discussion of roughly forty key financial management measures of a printing paper, industrial paper, or dual paper merchant group's performance. In its fullest extent, the PAR survey produces over 300 measures, and members participating in the survey receive in their PAR report much more information than that contained within the consolidated report entitled *Paper Merchant Performance*. For information about how your company can participate in the survey, please contact the Research Director at (516) 829-3070.

CHAPTER ONE:
OVERALL PAPER MERCHANT PERFORMANCE

SUMMARY

The NPTA's members distribute industrial and printing paper products; some members specialize in one or the other commodity line; others distribute both commodity lines. With this three way division in product emphasis, the NPTA recognizes three major groups of paper merchants, namely, printing paper merchants, industrial paper merchants, and dual paper merchants. This chapter reports summary performance for each of these major groups. The three major groups are discussed in detail in later chapters. (See Appendix A for the characteristics of the major groups of firms and Appendix B for a statement of the survey's methodology).

Merchants use three different methods to distribute paper, and each method involves different functions. This survey studies distribution methods as sales paths, namely, as warehouse sales, indirect and direct sales. *Warehouse* sales are sales of products from inventory in the merchant's warehouse. The merchant's prices and profit margins on warehouse sales contain factors covering the storage, handling, delivery, selling and administrative functions involved. *Indirect* sales are sales of products that the merchant receives from the manufacturer and immediately delivers to his customers without adding them to inventory. The merchant's prices and margins on indirect sales contain factors covering handling, delivery, selling and administrative functions involved. *Direct* sales are sales of products shipped from the manufacturer to the merchant's customer. The merchant's prices and margins on direct sales contain factors to cover the delivery, selling and administrative functions involved. Sales path margins are reported in the section on profit margin management.

Paper merchants in general have expressed a keen interest in the topic of sales compensation during recent years. As the cost of a typical sales call continues to escalate,

EXHIBIT 1

MAJOR MERCHANT GROUPS' SALES VOLUME CHANGES AND PRODUCER & CONSUMER PRICE CHANGES

(Percent Change Over Prior Year)

SALES VOLUME CHANGES[1]	1979	1980	1981	1982	1983	1984
ALL PRINTING FIRMS (%)	22.1	7.5	7.9	4.9	14.6	24.5
ALL INDUSTRIAL FIRMS (%)	16.9	11.8	11.3	3.5	8.3	11.8
ALL DUAL FIRMS (%)	14.2	11.5	8.4	-4.2	6.5	14.3
PRICE INDEX CHANGES[2]						
PRINTING PPI (%)[3]	11.9	7.1	11.2	-1.9	3.1	5.2
INDUSTRIAL PPI (%)[4]	12.1	10.3	7.6	0.6	1.2	5.3
URBAN CPI (%)[5]	13.5	12.4	8.9	3.9	3.8	4.0

INDEX SOURCE: Bureau of Labor Statistics, U.S. Department of Labor

[1]All values based on computation of composite averages; see Appendix B regarding such averages.
[2]The calculated changes reflect December to December variations.
[3]The Printing PPI is the code group 091301, namely, Paper, except Newsprint. The code group 091301 includes printing paper, book paper, bond wrapping paper, sack paper, butcher's paper and wax paper.
[4]The Industrial PPI is the code group 0915, namely, Converted Paper and Paperboard Products. The code group 0915 includes sanitary papers & health products (tissues, towels & napkins), paper bags & shipping sacks, paper boxes and containers, tape, office supplies & accessories and composite cans.
[5]The Urban CPI is the Consumer Price Index for All Urban Consumers.

EXHIBIT 2

PROFIT MODEL PERFORMANCE[1]

(Composite Average Values)[2]

GROUPS OF PAPER MERCHANT FIRMS		(1) NET PROFIT BEFORE TAX / NET SALES (%)	×	(2) NET SALES / TOTAL ASSETS (X)	=	(3) NET PROFIT BEFORE TAX / TOTAL ASSETS (%)	×	(4) TOTAL ASSETS / NET WORTH (X)	=	(5) NET PROFIT BEFORE TAX / NET WORTH (%)	(6) RETURN ON CAPITAL EMPLOYED[3] (%)
	1984	2.63		4.63		12.20		2.04		25.29	21.28
ALL	1983	2.30		4.09		9.40		1.96		18.79	17.27
PRINTING	1982	2.10		4.58		9.67		1.82		18.04	17.97
PAPER	1981	3.11		4.54		14.20		1.72		24.30	22.78
FIRMS	1980	3.25		4.58		14.89		1.94		29.02	24.78
	1984	1.96		4.18		8.20		1.80		15.02	13.32
ALL	1983	2.19		3.95		8.64		1.89		16.57	13.97
INDUSTRIAL	1982	1.64		4.20		6.86		1.92		13.48	12.59
PAPER	1981	2.63		4.16		10.94		1.99		22.15	19.24
FIRMS	1980	2.55		3.98		10.17		2.12		21.64	18.11
	1984	2.56		4.72		12.08		1.68		23.16	21.41
ALL	1983	2.50		4.30		10.74		1.76		20.41	18.20
DUAL	1982	2.23		4.70		10.58		1.96		20.86	18.24
PAPER	1981	3.13		4.64		14.55		1.85		23.95	21.28
FIRMS	1980	3.42		4.66		15.32		1.84		28.14	24.41

[1]See Appendix C for a discussion of the profit model.
[2]See Appendix B for a discussion of composite averages and Appendix D for definitions of measures.
[3]For an explanation of ROCE, see footnote 3, Page 9.

increased productivity in the inside and outside salesforce becomes an essential ingredient to better profitability and efficiency.

To address this request for sales department compensation and productivity information, a new section was added to the 1984 report, and is continued with the 1985 edition. Key sales department (inside & outside sales personnel) performance measures are displayed in Exhibit 3A, 3B, and 3C.

SALES PERFORMANCE

Sales increases recorded by paper merchants taking part in the 1985 PAR survey were the highest in recent memory. Very strong gains were posted by all three types of merchants, far outpacing inflation and resulting in substantial "real" (inflation-adjusted) sales gains. Printing paper merchants led the way with an average 24.5% increase, followed by dual merchants with a 14.3% rise, and industrial paper houses with 11.8%.

As the economy strengthened and paper end-user sectors flourished, inflation heated up slightly from 1983 levels. The producer price index for printing paper (source: U.S. Bureau of Labor Statistics) rose 5.2% in 1984, 5.3% for industrial paper. However, paper merchants' strong sales increases more than kept pace, resulting in *real* sales gains of 19.3% for printing paper firms and 6.5% for industrial houses. Dual firms' real increase was 9.1%. (See Exhibit 1 for 1979-84 sales changes and price indices.)

PROFITABILITY PERFORMANCE

Exhibit 2 displays the NPTA/MFI profit model for printing, industrial and dual merchants from 1980-84. The model is explained in more detail in Appendix C and it examines profit management in three key areas: sales profit margin management (column 1), asset management (column 2), and financial management (column 4). Refer to Appendix D for definitions of these measures.

Return on Net Sales (net profit before tax as % net sales) improved for the second consecutive year for printing paper and dual firms, but fell for industrial houses. RONS hit 2.63% and 2.56%, respectively, for printing and dual houses in 1984, and this profitability measure is approaching early 1980s levels.

Probably the most significant component of the profit model is ROTA (Return On Total Assets—net profit before tax as % total assets). And this measure again was up sharply for printing and dual merchants, to 12.20% and 12.08% respectively. Industrial houses' ROTA slipped to 8.20%. ROTA is a powerful concept in that it measures the combined effects of how well a business is doing to achieve a satisfactory

percentage net profit margin and in managing its asset investment. Therefore, ROTA is one of the best single measures of how a business is being managed operationally.

Return On Net Worth (net profit before tax as % net worth) also improved substantially in 1984. RONW hit 25.29% for printing paper merchants and 23.16% for dual firms. This represents a return to pre-recession 1981 levels. RONW slipped to 15.02% for industrial paper firms however. RONW is a comprehensive measure of a firm's net profit performance, its asset management performance, and its financial leverage position. One should not look at RONW *alone*, but explore *how* the return on net worth was achieved—was it by operational efficiency or by an excessive use of debt.

The "financial leverage multiplier" (or total assets divided by net worth) was up to 2.04 times (a 5-year high) for printing paper firms, but dropped to 5-year lows of 1.80 for industrial merchants and 1.68 for dual firms.

PERSONNEL PRODUCTIVITY & SALES COMPENSATION

PRINTING PAPER MERCHANTS

As shown in Exhibit 3A, printing paper merchants posted the highest net sales per employee of all three merchant types. This figure rose 15.4% to $409,400 during 1984. Gross profits per

EXHIBIT 3A

PRINTING PAPER MERCHANTS

(All Data Are Medians)

OVERALL PRODUCTIVITY MEASURES	1981	1982	1983	1984	Your Firm
Net Sales Per Employee ($000)	$331.5	$333.4	$354.9	$409.4	
Gross Profit Per Employee ($000)	53.8	53.2	56.8	61.7	
Total Compensation As % Gross Profit	54.7	57.0	56.5	55.2	
Personnel Productivity Index (all empl.)[1]	1.83	1.75	1.77	1.81	
SALES COMPENSATION MEASURES					
Overall Sales Department					
Sales Per Sales Dept. Employee ($000)	$746.3	$755.7	$782.1	$958.2	
Gross Profit Per Sales Dept. Emp. ($000)	117.2	118.1	127.8	141.0	
Sales Service & Selling Exp. As % Gross Profit	36.0	38.7	37.3	37.2	
Outside Sales Reps					
*Sales Per Outside Sales Rep ($000)	$1,160.4	$1,160.8	$1,217.0	$1,489.8	
*Gross Profit Per Outside Sales Rep ($000)	186.9	183.9	195.8	223.1	
*Avg. Pay & Travel Exp. ($000)	37.4	43.4	41.5	45.1	
*Avg. Pay & Travel Exp. As % G.P. (%)	22.6	24.6	23.2	21.4	
Sales Service Personnel					
Sales Per Sales Service Emp. ($000)	$2,208	$2,251	$2,426	$2,562	
Gross Profit Per Sales Service Emp. ($000)	345.8	347.0	361.0	389.0	
Avg. Pay of Sales Service Emp. ($000)	16.0	17.1	18.2	18.7	

[1]The Personnel Productivity Index is defined as: gross profit per employee divided by average compensation per employee. This is a measure that compares the gross profit generated by your employees to the total compensation they earn during the period. Other things being equal, you should prefer a higher PPI value.

**Includes supervisors*

EXHIBIT 3B

INDUSTRIAL PAPER MERCHANTS

(All Data Are Medians)

OVERALL PRODUCTIVITY MEASURES	1981	1982	1983	1984	Your Firm
Net Sales Per Employee ($000)	$184.1	$185.4	$199.4	$210.6	
Gross Profit Per Employee ($000)	40.7	40.8	44.4	45.4	
Total Compensation As % Gross Profit	63.6	64.4	64.1	64.5	
Personnel Productivity Index (all empl.)[1]	1.58	1.56	1.56	1.56	
SALES COMPENSATION MEASURES					
Overall Sales Department					
Sales Per Sales Dept. Employee ($000)	$411.2	$445.1	$495.0	$538.1	
Gross Profit Per Sales Dept. Employee ($000)	95.2	100.4	107.5	114.6	
Sales Service & Selling Exp. As % Gross Profit	36.5	39.4	38.9	39.4	
Outside Sales Reps					
*Sales Per Outside Sales Rep ($000)	$546.4	$551.4	$639.4	$662.6	
*Gross Profit Per Outside Sales Rep ($000)	124.0	120.7	148.6	149.7	
*Avg. Pay & Travel Exp. ($000)	31.3	32.3	36.0	35.5	
*Avg. Pay & Travel Exp. As % G.P. (%)	25.2	24.6	24.1	23.4	
Sales Service Personnel					
Sales Per Sales Service Emp. ($000)	$1,395	$1,862	$2,120	$2,332	
Gross Profit Per Sales Service Emp. ($000)	329.9	418.9	451.8	472.0	
Avg. Pay of Sales Service Emp. ($000)	14.3	15.3	15.9	15.6	

[1]The personnel Productivity Index is defined as: gross profit per employee divided by average compensation per employee. This is a measure that compares the gross profit generated by your employees to the total compensation they earn during the period. Other things being equal, you should prefer a higher PPI value.
**Includes supervisors*

employee were up 8.6% to $61,700. Net sales and gross profits per employee are general indicators of employee efficiency. In times of inflation one should *expect* these measures to increase each year. "Sales per" measures should be used with discretion. For example, a firm with a large amount of direct shipping should have a high sales per employee number. Conversely, a firm stressing warehouse sales should probably have a lower sales per employee.

All things being equal, a firm should prefer a rising "personnel productivity index" (see footnote to Exhibit 3A for definition). This was in fact the case; the index rose to 1.81 in 1984. Compensation took a smaller bite out of gross profits also, 55.2% in 1984 (lowest in four years).

The average printing paper outside sales rep sold $1.49 million of product, up 22.4% over 1983. That person generated $223,100 of gross profit (up 13.9%). Average pay (plus travel expenses) rose 8.7% to $45,100 for such reps, but relative to gross profits this was down from the prior year, to 21.4%.

Sales per sales service person rose 5.6% to $2.56 million during 1984 and gross profits per person were up 7.8% to $389,000. Discretion should be used here, as total company sales are divided by the actual number of sales reps or sales service people. Since there are usually less sales service employees in a paper distributor firm, the figure is higher than for outside sales reps. Average pay of sales service people rose even less than inflation in general, only 2.7% to $18,700.

INDUSTRIAL PAPER MERCHANTS

As shown in Exhibit 3B, net sales per employee for industrial merchants rose 5.6% to $210,600 in 1984, while gross profits per employee inched up 2.3% to $45,400. Compensation as a percent of gross profits reached a four-year high of 64.5% and the personnel productivity index stood still at 1.56. In fact, this productivity index has not moved at all since 1982.

Sales per outside sales rep rose only 3.6% to $662,600 and gross profits per outside rep were up marginally, 0.7% to $149,700. Average pay and travel expenses actually declined 1.4% to $35,500 for the typical outside sales rep. That person's salary and travel allowance took the smallest bite out of gross profits in four years—23.4%

Sales per sales service person rose 10% to $2.33 million during 1984, and gross profits per person were up 4.5% to $472,000. The average pay of these people also fell, 1.9% to $15,600 annually. Apparently, the cause of the rise in total compensation as a percent of total company gross profits lies

in an area other than the sales department, since inside and outside sales personnel's salaries were held in check during 1984.

DUAL PAPER MERCHANTS

Exhibit 3C provides a view of sales department performance for dual merchants. The personnel productivity index for all employees was improved, to 1.70 in 1984. Net sales per employee rose 4% to $300,900. More importantly, a substantial 13.2% improvement in gross profits generated per employee was registered, highest of all three merchant groups. This figure rose to $57,500. Another good sign—total compensation as a percent of gross profit fell to 58.7% in 1984.

Sales generated per outside sales rep rose 7.3% to $1.04 million and gross profits were up 0.7% to $165,200. Outside sales rep's pay plus travel expenses accounted for a greater share of gross profits (25.3%), and rose a healthy 7.8% to $44,100. The biggest jump in salary, however, was posted by sales service employees. Their pay rose 19.7% to $19,400, making them the highest paid sales service personnel, on average, of all three merchant groups. Perhaps this is justified, however, when considering that sales per sales service employee jumped 11% to $2.02 million and gross profits skyrocketed 26% to $379,800.

EXHIBIT 3C

DUAL PAPER MERCHANTS

(All Data Are Medians)

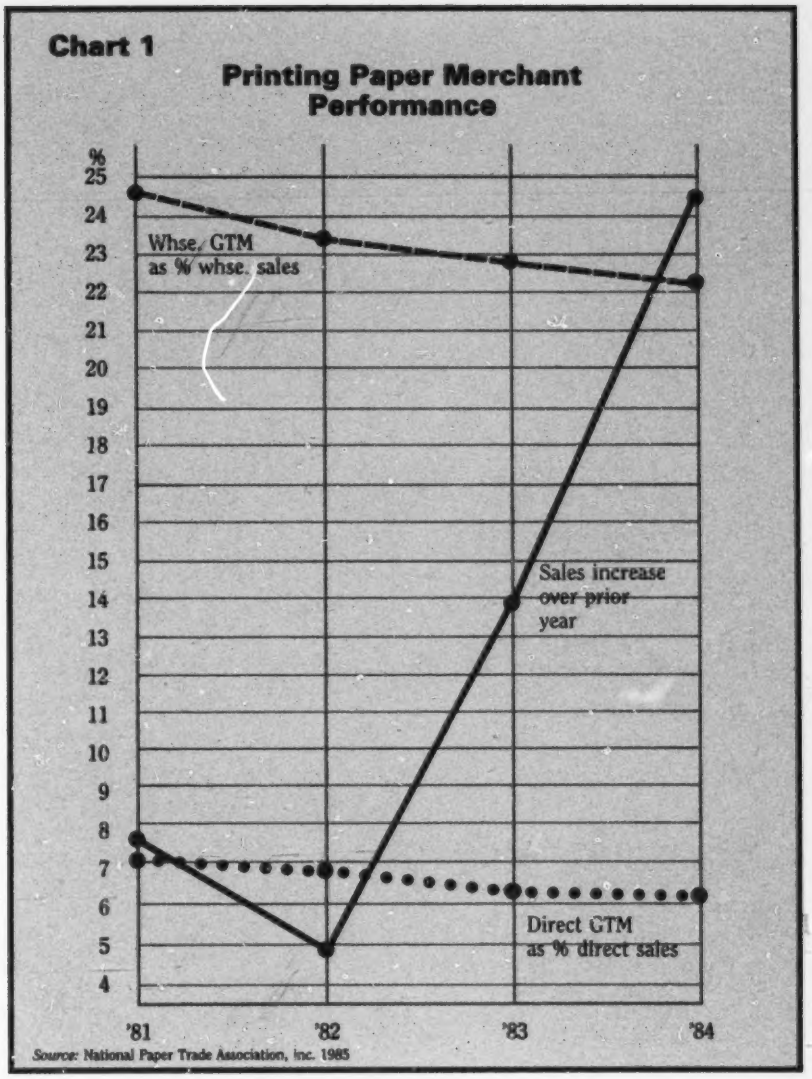
OVERALL PRODUCTIVITY MEASURES	1981	1982	1983	1984	Your Firm
Net Sales Per Employee ($000)	$253.9	$259.5	$289.2	$300.9	
Gross Profit Per Employee ($000)	48.1	47.6	50.8	57.5	
Total Compensation As % Gross Profit	57.3	60.6	60.3	58.7	
Personnel Productivity Index (all empl.)[1]	1.74	1.65	1.66	1.70	
SALES COMPENSATION MEASURES					
Overall Sales Department					
Sales Per Sales Dept. Employee ($000)	$565.5	$580.7	$602.3	$650.7	
Gross Profit Per Sales Dept. Employee ($000)	105.2	103.9	108.8	120.8	
Sales Service & Selling Exp. As % Gross Profit	34.3	35.1	36.2	37.4	
Outside Sales Reps					
*Sales Per Outside Sales Rep ($000)	$864.6	$859.8	$968.6	$1,039.6	
*Gross Profit Per Outside Sales Rep ($000)	162.2	154.6	164.0	165.2	
*Avg. Pay & Travel Exp. ($000)	37.7	37.4	40.9	44.1	
*Avg. Pay & Travel Exp. As % G.P. (%)	26.8	25.7	24.8	25.3	
Sales Service Personnel					
Sales Per Sales Service Emp. ($000)	$1,638	$1,806	$1,820	$2,021	
Gross Profit Per Sales Service Emp. ($000)	324.9	325.1	301.5	379.8	
Avg. Pay of Sales Service Emp. ($000)	15.5	15.9	16.2	19.4	

[1]The Personnel Productivity Index is defined as: gross profit per employee divided by average compensation per employee. This is a measure that compares the gross profit generated by your employees to the total compensation they earn during the period. Other things being equal, you should prefer a higher PPI value.

**Includes supervisors*

CHAPTER TWO:
PRINTING PAPER MERCHANT PERFORMANCE

Printing paper merchants are defined as paper distributors who obtain 80% or more of their sales from the sale of printing paper products. This includes such items as: fine paper, envelopes, cut and standard size, text and cover stocks, and printing supplies (toner, inks, blankets, plates, etc.) as well as punching and cutting as an additional "value added" service to customers. (See Appendix A for characteristics of these merchants)



SALES PERFORMANCE

Printing paper merchants posted the highest sales increase of all three groups in 1984 (see Exhibit 4). Sales rose 24.5% for this group as a whole. The sales mix shifted significantly, to 53.9% *direct* sales, the highest level since 1979. With this increased emphasis on direct sales (sales shipped from the paper mill directly to the merchant's customer), of course the average direct order size jumped 13.4% to $6,858. This order size is nearly 64% higher than only two years ago in 1982. The average warehouse order size stood at $399, $905 for indirect orders.

PROFITABILITY PERFORMANCE

The profit model in Exhibit 5 analyzes various profitability measures for printing paper merchants from 1974-84. (See Appendix C for a detailed explanation). The model examines sales management, the management of assets as resources used to generate sales, financial leverage, and returns on assets and net worth.

As discussed in Chapter 1, significant improvement was made in *all* profitability measures included in this model. Return On Net Sales (RONS) was up to 2.63% in 1984 (highest

EXHIBIT 4

SALES PERFORMANCE MEASURES FOR PRINTING PAPER MERCHANTS

(All Values Are Composite Averages)[1]

PERFORMANCE MEASURES	1975	1977	1978	1979	1980	1981	1982	1983	1984	Your Firm
% SALES CHANGE OVER PRIOR YEAR (%)	—	13.7	17.6	22.1	7.5	7.9	4.9	14.6	24.5	
WAREHOUSE SALES[2] — % TOTAL SALES (%)	52.9	42.1	39.5	36.5	44.1	43.9	43.0	45.7	43.5	
INDIRECT SALES[2] — % TOTAL SALES (%)	—	—	6.2	4.2	4.6	5.6	5.1	4.5	4.6	
WHSE & IND SALES[2] — % TOTAL SALES (%)	—	—	42.4	41.8	47.2	48.8	48.4	48.8	46.1	
DIRECT SALES[2] — % TOTAL SALES (%)	—	—	57.6	58.2	52.8	51.2	51.6	51.2	53.9	
AVERAGE WAREHOUSE ORDER SIZE ($)	178	232	236	299	297	322	332	370	399	
AVERAGE INDIRECT ORDER SIZE ($)	—	—	718	886	920	800	940	877	905	
AVERAGE WHSE & IND ORDER SIZE ($)	—	—	263	318	314	317	354	384	421	
AVERAGE DIRECT ORDER SIZE ($)	2,733	3,810	4,026	4,696	4,485	4,864	4,187	6,050	6,858	

Sources: Values for 1976 and earlier: Price Waterhouse and NPTA.
Values for 1977 and later: Management Foresight, Inc.

[1]See Appendix B for a discussion of composite averages.
[2]As discussed in Appendix E, the addition of an "indirect sales" category reduced the comparability of the 1978 and later, sales values to the 1977, and earlier results. However, the 1978 and later results are mutually comparable.

EXHIBIT 5

PRINTING PAPER MERCHANTS' PROFIT MODEL PERFORMANCE[1]

(Composite Average Values)[2]

	(1) NET PROFIT BEFORE TAX / NET SALES (%)	×	(2) NET SALES / TOTAL ASSETS (X)	=	(3) NET PROFIT BEFORE TAX / TOTAL ASSETS (%)	×	(4) TOTAL ASSETS / NET WORTH (X)	=	(5) NET PROFIT BEFORE TAX / NET WORTH (%)	(6) RETURN ON CAPITAL EMPLOYED[3] (%)
1984	2.63		4.63		12.20		2.04		25.29	21.28
1983	2.30		4.09		9.40		1.96		18.79	17.27
1982	2.10		4.58		9.67		1.82		18.04	17.97
1981	3.11		4.54		14.20		1.72		24.30	22.78
1980	3.25		4.58		14.89		1.94		29.02	24.78
1979	3.16		4.65		14.53		2.26		33.51	25.72
1978	2.35		4.40		10.50		2.29		24.29	19.69
1977	2.65		4.11		11.30		1.79		21.12	22.19
1976	3.43		3.79		13.00		1.61		20.94	19.5
1975	3.72		3.31		12.31		1.65		20.32	20.9
1974	4.99		3.91		19.50		1.74		33.87	30.9

[1]See Appendix C for a discussion of the MFI Profit Model.

[2]The measures shown under columns 1-5 are computed individually. Therefore, the values in column 3 are the result of dividing Net Profit Before Tax by Total Assets and are not the result of multiplying column 1's values by column 2's values; the values in column 5 are the result of dividing Net Profit Before Tax by Net Worth and are not the result of multiplying column 3's values by column 4's values.

[3]Return on Capital Employed was defined in 1977 and prior years as "net profit before taxes plus interest on borrowed funds minus income from outside investments" divided by "net worth, or owner's equity, plus long term debt minus outside investments". In 1978 and later years, Bank Loans Due in Less Than One Year was added to the denominator of the ratio (the capital invested) to recognize that some, if not most, of the total interest paid by the typical paper distributor resulted from bank loans. See Appendix D for a complete definition of the measure.

since 1981), net sales divided by total assets reached 4.63 times (best since 1979), net profit before tax divided by net worth jumped to 25.29% (best since 1980), and most importantly the vital measure Return On Total Assets (ROTA—net profit before tax as % total assets) jumped to 12.20% from 9.40% the prior year.

PROFIT MARGIN MANAGEMENT

Exhibit 6A presents ten key measures of profit margin management, in three main areas: sales profitability, operating expense control, and personnel productivity.

Prior to 1978, merchant sales were studied in terms of two sales paths (i.e. warehouse sales and direct sales). Beginning with the report for 1978, merchants separated indirect sales from warehouse sales so that sales are now studied in terms of four paths — warehouse and direct sales as before and also for indirect and warehouse & indirect sales.

In the industry there is a natural tendency for gross margins to decline when sales rise. This is in fact what happened during 1984, but not to the extent expected when considering that sales rose 24.5%. Warehouse gross margins (as % warehouse sales) held up quite well, only falling from 22.7% in 1983 to 22.1% by 1984. With larger orders, margins decline due to "bracket pricing" discounts used. The fact that margins did not drop too far suggests that salesmen are getting better margins on their orders. Direct gross margin did however fall to the lowest level since 1975 — 6.3%.

Operating expenses were cut substantially, accounting for 81.8% of gross margins in 1984 versus 85.3% the year before. The main contributor to this reduced expense was the fact that total employee compensation accounted for a lesser percentage of gross margins — 53.5% (lowest since 1980).

Net sales per employee were up 22.4% to $474,600 and gross margins per employee rose 15% to $64,400. One would expect these overall employee efficiency ratios to increase every year, with inflation. An encouraging sign for printing paper merchants is that they were able to trim sales service and selling expenses to 36.4% of gross margins, for the second consecutive year. Perhaps this is a result of increased productivity generated by such tools as telemarketing programs put into place.

As shown in Exhibit 6B, values for these profit margin management ratios are much better for the upper quartile group of printing paper merchants than the median (50% are above and below the median figure). This is most pronounced in the area of operating expenses, where the "upper quartile" performers had operating expenses relative to gross margins nearly 7 percentage points less than the median. In addition, warehouse gross margins were nearly 3 percentage points higher, and gross margins per employee were over $11,000 higher than the median.

Without exception, sales increases, return on total assets (ROTA), and return on capital employed were higher for the larger merchants (see Table 2B, sales volume groups, in back of book).

ASSET MANAGEMENT PERFORMANCE

Exhibit 7A presents four key asset management performance measures. The best overall measure of asset management is

EXHIBIT 6A

PROFIT MARGIN PERFORMANCE MEASURES FOR PRINTING PAPER MERCHANTS

(All Values Are Composite Averages)

PROFITABILITY[1]	1975	1977	1978	1979	1980	1981	1982	1983	1984	Your Firm
WAREHOUSE GROSS MARGIN — % WHSE SALES (%)	25.6	24.4	24.8	24.7	24.5	24.5	23.3	23.0	22.5	
INDIRECT GROSS MARGIN — % INDIRECT SALES (%)	—	—	16.5	17.7	17.7	17.5	17.0	17.6	17.5	
WHSE & IND GROSS MARGIN — % WHSE & IND SALES (%)	—	—	23.7	24.2	24.2	24.1	22.9	22.7	22.1	
DIRECT GROSS MARGIN — % DIRECT SALES (%)	8.5	7.3	7.4	7.6	7.5	7.2	7.1	6.6	6.3	
OPERATING EXPENSE CONTROL										
OPERATING EXPENSE — % OF GROSS MARGIN (%)	80.4	82.2	83.8	78.2	78.9	80.4	86.6	85.3	81.8	
NON-PEOPLE EXPENSE — % OF GROSS MARGIN (%)	—	—	—	—	25.8	26.3	29.2	28.6	28.5	
TOTAL EMPLOYEE COMPENSATION — % OF GROSS MARGIN (%)	53.5	56.6	56.3	52.7	53.2	53.8	57.3	57.1	53.5	
PERSONNEL PRODUCTIVITY										
NET SALES PER EMPLOYEE ($000)	173.3	244.4	281.1	342.1	329.4	351.0	358.8	387.8	474.6	
GROSS MARGIN PER EMPLOYEE ($000)	—	35.8	41.0	50.2	51.3	54.2	52.9	56.0	64.4	
SALES SVC & SELL EXPENSE — % GROSS MARGIN (%)	34.9	37.9	38.2	36.5	35.7	36.3	38.5	37.5	36.4	

[1]This survey studied only warehouse and direct sales until indirect sales were separated and excluded from warehouse sales starting with data for 1978. Thus, the published values for 1977 and earlier years are not directly comparable with values for 1978 and later years. However, values for 1978 and later years are mutually comparable.

EXHIBIT 6B

SOME PROFIT MARGIN PERFORMANCE GOALS FOR PRINTING PAPER MERCHANT FIRMS

(Based on 1984 Business Conditions & Performances)

	UPPER QUARTILE[1] OF ALL PRINTING PAPER FIRMS	MEDIAN[2] OF HIGH PROFIT (ROTA) GROUP
PROFITABILITY		
WHSE PP GM — % WHSE PP SALES (%)	25.84	22.92
DIR PP GM — % DIR PP SALES (%)	7.60	6.25
OPERATING EXPENSE CONTROL		
OPERATING EXPENSES — % GROSS MARGIN (%)	78.33	85.10
NON-PEOPLE EXPENSES — % GROSS MARGIN (%)	26.19	29.17
TOTAL COMPENSATION — % GROSS MARGIN (%)	50.16	55.29
PERSONNEL PRODUCTIVITY		
GROSS MARGIN PER EMPLOYEE ($)	73,930	62,460

[1]After individual company values have been calculated and ordered by size, the value standing in the middle of the upper half of values is the upper quartile. The upper quartile is the average of the values in the 25th & 26th position in a set of 100 all firms' values.
[2]After individual company values have been calculated and ordered by size, the value standing in the middle of the top quarter of values is the median of the high profit group. The median of the high profit group is the average of the values in the 12th & 13th positions in a set of 100 ROTA profit group firms' values (See Appendix B for ROTA Profit Groups).

"Total Asset Turnover," defined as Net Sales divided by Total Assets. A higher figure indicates that the firm is generating a larger amount of sales from its investment. This is vital because assets must be financed, either with debt or with owner's funds. Thus, with more profit earned on a smaller investment, the percentage return on the owner's investment will be increased.

During 1984, total assets turnover was improved markedly, reaching 4.63 times (best since 1979). Inventory was turned over more rapidly also, 4.93 times per year in 1984. This may have been due to the short supply of coated stock, and the influx of imported paper. The average collection period was cut to 42.9 days of receivables as well, another good sign. Exhibit 7B presents the "upper quartile" asset management measures for printing paper merchants to set as goals. As an example, inventory was turned over 1.58 times faster than the median by upper quartile firms, and receivables were collected 3.75 days faster. However, policies regarding turnover and collections depend to a large degree upon the individual company's style of operation.

EXHIBIT 7A

ASSET MANAGEMENT PERFORMANCE MEASURES FOR PRINTING PAPER MERCHANTS

(All Values Are Composite Averages, Unless Otherwise Noted)

OVERALL ASSET MANAGEMENT	1975	1977	1978	1979	1980	1981	1982	1983	1984	Your Firm
NET SLS TO TOTAL ASSETS (X)	3.31	4.11	4.40	4.65	4.56	4.55	4.58	4.09	4.63	
INVENTORY MANAGEMENT										
INVENTORY TURNOVER (X)[1]	3.97	5.51	4.98	6.01	5.13	4.85	4.95	4.80	4.93	
GROSS MARGIN RETURN ON INVENTORY (%)[2]	137	175	164	197	166	158	151	143	141	
ACCOUNTS RECEIVABLE MANAGEMENT										
AVG. COLLECTION PERIOD (DAYS)[3] (Weighted Mean)	53	45.4	48.0	46.0	42.5	43.1	44.2	43.5	42.9	

[1]Inventory Turnover is calculated as Cost of Warehouse Goods Sold to Average Inventory (average of beginning and ending inventories for the year). However, remember that the definition of warehouse sales was narrowed to exclude indirect sales for 1978 and later years.
[2]Gross Margin Return On Inventory is defined as Gross Margin On Warehouse Sales divided by Average Inventory. Starting with the 1978 data, indirect sales were separated and exluded from warehouse sales. Thus, the above values for 1977 and earlier years are not directly comparable with the values for 1978 and later years. However, the values for 1978 and later years are mutually comparable.
[3]The calculation approach used for each measure is defined in Appendix D.

EXHIBIT 7B

SOME ASSET MANAGEMENT PERFORMANCE GOALS FOR PRINTING PAPER MERCHANT FIRMS

(Based on 1984 Business Conditions & Performances)

OVERALL ASSET MANAGEMENT	UPPER QUARTILE[1] OF ALL PRINTING PAPER FIRMS	MEDIAN[2] OF HIGH PROFIT (ROTA) GROUP
NET SALES TO TOTAL ASSETS (X)	5.74	4.82
INVENTORY MANAGEMENT		
INVENTORY TURNOVER (X)	6.88	5.30
GROSS MARGIN RETURN ON INVENTORY (%)	206.67	145.78
ACCOUNTS RECEIVABLE MANAGEMENT		
DAYS SALES IN ACCOUNTS RECEIVABLE ON NOV. 30 (DAYS)[3]	36.96	40.71

[1]The upper quartile is the value standing in the middle of the top half of the ordered values. In a set of about 100 values, the upper quartile is about 25th from the top.
[2]The median of the high profit group (See Appendix B for the ROTA Profit Groups) is the value standing in the middle of the top quarter of the ordered values. In a set of about 100 values, the median of the high profit group is about 12th from the top.
[3]This is a more precisely defined measure of collection period than Average Collection Period which is based on sales for the year. Days Sales...is calculated by dividing credit sales for Oct. + Nov. by 61 to get a more accurate measure of average credit sales per day and then dividing this value into the trade notes and accounts receivable (after reserve for bad debts) on Nov. 30.

EXHIBIT 8

FINANCIAL MANAGEMENT MEASURES FOR PRINTING PAPER MERCHANTS

(All Values Are Medians)

FINANCIAL LEVERAGE	1979	1980	1981	1982	1983	1984
TOTAL DEBT TO NET WORTH (%)	158.7	131.4	99.8	84.42	93.67	73.68
CURRENT DEBT TO NET WORTH (%)	127.4	104.5	80.6	72.26	84.06	69.48
ABILITY TO PAY CURRENT DEBTS						
CURRENT ASSETS MINUS INVENTORY TO CURRENT DEBT (X)	1.26	1.51	1.52	1.70	1.38	1.51
DAYS PAYABLES OUTSTANDING ON DEC. 31 (DAYS)	21.0	21.4	19.4	19.8	21.7	20.6

FINANCIAL MANAGEMENT

Exhibit 8 covers four measures of financial management for printing paper merchants. Total debt and current debt relative to net worth both dropped sharply in 1984, to 73.68% and 69.48% respectively. The "Quick Ratio" (current assets minus inventory, to current debt improved to 1.51 times and days payable outstanding was reduced to 20.6 days.

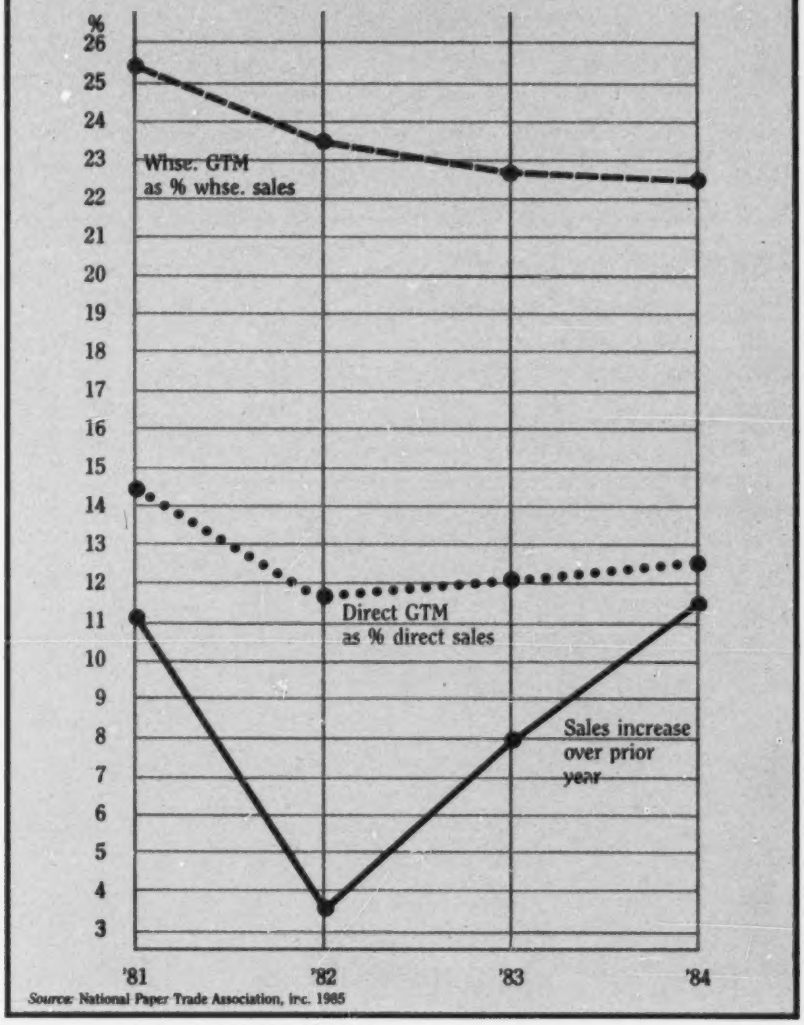
The fall in total and current debt relative to net worth, coupled with a significant improvement in assets turnover, strong sales growth and good margins suggests that cash flow was very good for printing paper houses in 1984. In good years, merchants generally rely less on debt and pay down their liabilities. Strong performance in the above-mentioned areas meant that firms' relative needs for financing did not increase significantly. Referring to Table 6 in the back of the book (composite balance sheet), one sees that short term debts were reduced considerably versus 1983. Total current liabilities constituted 37.2% of total assets in 1984 (vs. 42.5% in 1983). Accounts payable dropped from 30.1% to 26.7% and bank loans (less than one year) fell from 6.6% to 4.4% of total assets.

CHAPTER THREE:
INDUSTRIAL PAPER MERCHANT PERFORMANCE

Industrial paper merchants are paper distributors who obtain 80% or more of their sales dollars from the sale of industrial paper products (such as: sanitary papers, food service disposables, packaging equipment, protective packaging, shipping boxes, tapes, janitorial supplies, retail/matched packaging, health care disposables). See Appendix A for the characteristics of merchants studied in the report.

Chart 2

Industrial Paper Merchant Performance



Source: National Paper Trade Association, Inc. 1985

EXHIBIT 9

SALES PERFORMANCE MEASURES FOR INDUSTRIAL PAPER MERCHANTS

(All Values Are Composite Averages)[1]

PERFORMANCE MEASURES	1975	1977	1978	1979	1980	1981	1982	1983	1984	Your Firm
% SALES CHANGE OVER PRIOR YEAR (%)	—	7.1	13.4	16.9	11.8	11.3	3.5	8.3	12.0	
WAREHOUSE SALES[2] — % TOTAL SALES (%)	77.6	76.8	68.9	69.9	74.7	71.8	66.3	69.7	66.2	
INDIRECT SALES[2] — % TOTAL SALES (%)	—	—	10.6	7.0	5.4	7.6	6.2	5.9	5.7	
WHSE & IND. SALES[2] — % TOTAL SALES (%)	—	—	81.7	77.4	79.4	78.0	75.5	76.1	71.9	
DIRECT SALES[2] — % TOTAL SALES (%)	—	—	18.3	22.6	20.8	22.0	24.5	23.9	28.4	
AVERAGE WAREHOUSE ORDER SIZE ($)	135	154	163	163	180	196	250	243	282	
AVERAGE INDIRECT ORDER SIZE ($)	—	—	240	278	296	256	309	372	371	
AVERAGE WHSE & IND ORDER SIZE ($)	—	—	151	167	190	206	248	237	266	
AVERAGE DIRECT ORDER SIZE ($)	649	506	775	1,105	1,060	1,260	1,476	1,500	1,747	

Sources: Values for 1976 and earlier: Price Waterhouse and NPTA.
Values for 1977 and later: Management Foresight, Inc.

[1]See Appendix B for a discussion of composite averages.
[2]As discussed in Appendix E, the addition of an "indirect sales" category reduced the comparability of the 1978, and later, sales values to the 1977, and earlier, results. However, the 1978 and later results are mutually comparable.

SALES PERFORMANCE

As shown in Exhibit 9, the 1984 sales increase of 12% for industrial paper merchants represents a healthy return to gains seen in the late 1970s—early 1980s. Sales revenues did not increase as fast as in printing paper or dual houses, but nevertheless represent a 6.7% "real" inflation-adjusted increase. As in printing paper, the share of sales accounted for by direct orders was up sharply to 28.4% (highest in 7 years). Conversely, the share of total sales contributed by warehouse orders fell to 66.2% (10-year low) and indirect orders slipped to 5.7% (lowest since 1980). The average direct order size in 1984 jumped 16.5% to $1,747, while rising 16% to $282 for warehouse orders and staying about the same at $371 for indirect orders.

Some possible reasons why the sales increase for industrial paper merchants was not as high as in the printing paper area could be the competition faced in food service disposables, janitorial supplies, and other markets. Restaurant supply houses and wholesale grocers are strong competitors in these areas. Some merchants are also seeing more "mill direct" shipments of industrial packaging products. Plastic items such as can liners have come down in price as oil prices stabilized or fell during 1984. Evidence of possible erosion of the merchants' share of the food service disposables market can be seen in PAR results. In 1983, 13.38% of industrial merchants' total sales were to "food & food service and fast food outlets" customers. This

dropped to 11.97% in 1984. For dual merchants selling industrial paper, this percentage dropped from 12.66% to 5.36%!

PROFITABILITY PERFORMANCE

The profit model in Exhibit 10 covers several profitability measures for industrial paper merchants from 1974-84 (see Appendix C for a detailed explanation). The model examines sales management, the management of assets as resources used to generate sales, financial leverage, and returns on assets and net worth.

After an improvement in most components of this profit model during 1983, nearly all profitability measures worsened in 1984, unlike the strong improvements seen by printing paper houses.

The Total Asset Turnover ratio (net sales divided by total assets) did improve from 3.95 times to 4.18 times in 1984. However, all other ratios declined. Return On Net Sales (RONS—net profit before tax divided by net sales) fell to 1.96%. ROTA (Return On Total Assets—net profit before tax divided by total assets), an extremely important indicator, fell to 8.20%. RONW (Return On Net Worth—net profit before tax divided by net worth) slipped to 15.02%, and Return on Capital Employed fell to 13.32%. These figures are all at or near 10-year historical lows.

EXHIBIT 10

INDUSTRIAL PAPER MERCHANTS' PROFIT MODEL PERFORMANCE[1]

(Composite Average Values)[2]

	(1) NET PROFIT BEFORE TAX / NET SALES (%)	×	(2) NET SALES / TOTAL ASSETS (X)	=	(3) NET PROFIT BEFORE TAX / TOTAL ASSETS (%)	×	(4) TOTAL ASSETS / NET WORTH (X)	=	(5) NET PROFIT BEFORE TAX / NET WORTH (%)	(6) RETURN ON CAPITAL EMPLOYED[3] (%)
1984	1.96		4.18		8.20		1.80		15.02	13.32
1983	2.19		3.95		8.64		1.89		16.57	13.97
1982	1.64		4.20		6.86		1.92		13.48	12.59
1981	2.63		4.16		10.94		1.99		22.15	19.24
1980	2.55		3.48		10.17		2.12		21.64	18.11
1979	2.31		3.93		9.07		2.03		18.69	15.95
1978	2.15		4.02		8.66		1.99		17.23	14.61
1977	2.53		3.83		9.49		2.00		18.97	18.69
1976	3.31		3.69		12.22		2.09		25.55	20.1
1975	3.65		3.71		13.56		2.11		28.57	23.6
1974	4.33		3.54		15.31		2.20		33.74	25.8

[1]See Appendix C for a discussion of the MFI Profit Model.

[2]The measures shown under columns 1-5 are computed individually. Therefore, the values in column 3 are the result of dividing Net Profit Before Tax by Total Assets and are not the result of multiplying column 1's values by column 2's values; the values in column 5 are the result of dividing Net Profit Before Tax by Net Worth and are not the result of multiplying column 3's values by column 4's values.

[3]Return on Capital Employed was defined in 1977 and prior years as "net profit before taxes plus interest on borrowed funds minus income from outside investments" divided by "net worth, or owner's equity, plus long term debt minus outside investments." In 1978 and later years, Bank Loans Due in Less Than One Year was added to the denominator of the ratio (the capital invested) to recognize that some, if not most, of the total interest paid by the typical paper distributor resulted from bank loans. See Appendix D for a complete definition of the measure.

EXHIBIT 11A

PROFIT MARGIN PERFORMANCE MEASURES FOR INDUSTRIAL PAPER MERCHANTS

(All Values Are Composite Averages)

PROFITABILITY[1]	1975	1977	1978	1979	1980	1981	1982	1983	1984	Your Firm
WAREHOUSE GROSS MARGIN — % WHSE SALES (%)	25.3	23.8	24.3	25.2	25.0	25.5	23.1	22.9	22.7	
INDIRECT GROSS MARGIN — % INDIRECT SALES (%)	—	—	22.9	25.1	25.7	26.4	24.3	22.7	23.2	
WHSE & IND GROSS MARGIN — % WHSE & IND SALES (%)	—	—	23.6	24.4	25.4	24.8	23.0	22.7	23.1	
DIRECT GROSS MARGIN — % DIRECT SALES (%)	13.9	13.8	14.2	15.3	14.1	14.8	11.6	12.0	12.7	
OPERATING EXPENSE CONTROL										
OPERATING EXPENSE — % OF GROSS MARGIN (%)	85.3	89.2	90.7	89.0	89.3	89.7	95.1	92.9	94.3	
NON-PEOPLE EXPENSE — % OF GROSS MARGIN (%)	—	—	—	—	27.5	26.1	27.8	27.5	26.8	
TOTAL EMPLOYEE COMPENSATION — % GROSS MARGIN (%)	61.7	65.6	64.3	63.3	61.4	63.6	65.4	64.0	64.0	
PERSONNEL PRODUCTIVITY										
NET SALES PER EMPLOYEE ($000)	123.1	134.7	139.9	150.8	159.0	180.0	204.6	217.6	239.5	
GROSS MARGIN PER EMPLOYEE ($000)	—	29.8	30.3	33.7	36.6	40.6	41.6	44.5	48.4	
SALES SVC & SELL EXPENSE — % GROSS MARGIN (%)	35.0	35.7	36.9	36.2	36.1	35.5	38.6	38.3	38.9	

[1]This survey studied only warehouse and direct sales until indirect sales were separated and excluded from warehouse sales starting with data for 1978. Thus, the published values for 1977 and earlier years are not directly comparable with the values for 1978 and later years. However, values for 1978 and later years are mutually comparable.

PROFIT MARGIN MANAGEMENT

Exhibit 11A presents ten key measures of profit margin management for industrial paper merchants in three main areas: sales profitability, operating expense control, and personnel productivity. Prior to 1978, merchant sales were studied in terms of two sales paths (i.e. warehouse sales and direct sales). Beginning with the 1978 report, merchants separated indirect sales from warehouse sales so that sales are now studied in terms of four paths—warehouse and direct sales as before and also for indirect and warehouse & indirect sales.

Industrial merchants' warehouse gross margins slipped again, very slightly, to 22.7% of warehouse sales in 1984. This does represent a new historical low, however. Gross margin on indirect sales rose, though, to 23.2% and were up to 23.1% on warehouse & indirect sales and to 12.7% on direct sales.

Operating expenses are still at historically high levels, although non-people expenses as a percent of gross margin did come down to 26.8% in 1984. In good years, non-people costs (rent, utilities, supplies, maintenance, etc.) should go down because they do not rise as fast as sales. Total employee compensation relative to gross margins was held at 64%, so the increased operating expenses originated in other areas.

In the area of personnel productivity, net sales per employee were up 10.1% to $239,500 and gross margins per employee rose 8.8% to $48,400. One expects these general employee efficiency measures to rise each year with inflation. Sales service and selling expenses remained near 39% of gross margin dollars in 1984, as it has since 1982.

Exhibit 11B presents profitability, operating expense control and personnel productivity measures for the upper quartile and high profit (ROTA) groups of individual

merchants. These are high performance goals for industrial houses to strive for. Upper quartile firms had warehouse gross margins almost four percentage points higher than the median (26.50% vs. 22.54%). Direct gross margins were almost five points higher (18.01 vs. 13.06). Operating expenses were 86.93% relative to gross margins, compared to a median 92.44% and gross margins per employee were $11,190 higher for the top performers.

ASSET MANAGEMENT PERFORMANCE

Exhibit 12A presents four key asset management performance measures. The most important measure, Total Asset Turnover (net sales to total assets), improved to 4.18 times during 1984, representing a return to early 1980s levels. Inventory turnover improved slightly again to 6.32 turns annually. The average collection period rose significantly to 39.5 days of receivables after being cut substantially in 1983. This is the longest collection period seen by industrial merchants since 1979 and could be costly in terms of too lenient collections policies. Collection policies do, however, differ among various firms, depending on their style of operation.

Exhibit 12B presents the upper quartile, top performer results for several management measures. Total Assets Turnover is 1.26 times higher for the upper quartile firms than the median. Inventory was turned over 2.23 times more per year. Finally, there was a big difference in collecting receivables on time, 29.8 days for the top performers versus 37.8 days for the median firm—a difference of fully 8 days tied up in receivables that could be used for investment, cash flow or working capital.

EXHIBIT 11B

SOME PROFIT MARGIN PERFORMANCE GOALS FOR INDUSTRIAL PAPER MERCHANT FIRMS

(Based on 1984 Business Conditions & Performances)

PROFITABILITY	UPPER QUARTILE[1] OF ALL INDUSTRIAL PAPER FIRMS	MEDIAN[2] OF HIGH PROFIT (ROTA) GROUP
WHSE IP GM — % WHSE IP SALES (%)	26.50	22.54
DIR IP GM — % DIR IP SALES (%)	18.01	13.06
OPERATING EXPENSE CONTROL		
OPERATING EXPENSE — % GROSS MARGIN (%)	86.93	92.44
NON-PEOPLE EXPENSE — % GROSS MARGIN (%)	24.13	28.59
TOTAL COMPENSATION — % GROSS MARGIN (%)	58.12	63.80
PERSONNEL PRODUCTIVITY		
GROSS MARGIN PER EMPLOYEE ($)	56,420	45,230

[1]After individual company values have been calculated and ordered by size, the value standing in the middle of the upper half of values is the upper quartile. The upper quartile is the average of the values in the 25th + 26th positions in a set of 100 all firms' values.
[2]After individual company values have been calculated and ordered by size, the value standing in the middle of the top quarter of values is the median of the high profit group. The median of the high profit group is the average of the values in the 12th + 13th positions in a set of 100 ROTA profit group firms' values (See Appendix B for ROTA Profit Groups).

EXHIBIT 12A

ASSET MANAGEMENT PERFORMANCE MEASURES

FOR INDUSTRIAL PAPER MERCHANTS

(All Values Are Composite Averages, Unless Otherwise Noted)

OVERALL ASSET MANAGEMENT	1975	1977	1978	1979	1980	1981	1982	1983	1984
NET SLS TO TOTAL ASSETS (X)	3.71	3.83	4.02	3.93	4.00	4.16	4.20	3.95	4.18
INVENTORY MANAGEMENT									
INVENTORY TURNOVER (X)[1]	6.54	6.89	7.57	6.44	6.61	7.07	6.07	6.26	6.32
GROSS MARGIN RETURN ON INVENTORY (%)[2]	222	247	243	217	221	242	182	184	185
ACCOUNTS RECEIVABLE MANAGEMENT									
AVG. COLLECTION PERIOD(DAYS)[3] (Weighted Mean)	35	36.1	40.1	40.5	39.4	38.2	38.6	36.7	39.5

[1]Inventory Turnover is calculated as Cost of Warehouse Goods Sold to Average Inventory (average of beginning and ending inventories for the year). However, remember that the definition of warehouse sales was narrowed to exclude indirect sales for 1978 and later years.
[2]Gross Margin Return On Inventory is defined as Gross Margin On Warehouse Sales divided by Average Inventory. Starting with the 1978 data, indirect sales were separated and excluded from warehouse sales. Thus, the above values for 1977 and earlier years are not directly comparable with the values for 1978 and later years. However, the values for 1978 and later years are mutually comparable.
[3]The calculation approach used for each measure is defined in Appendix D.

FINANCIAL MANAGEMENT

Exhibit 12A presents four key asset management performance measures. The most important measure, Total rose from 90.6% to 102.5%, in sharp contrast to the falling debt ratio posted by printing paper merchants. Current debt to net worth fell slightly to 69.1%, second lowest in six years. However, this is again in contrast to printing paper houses where the debt ratio was much lower in 1984 than 1983. The "Quick Ratio" improved once again (current assets minus inventory to current debt) to 1.46 times. This is a good sign in that industrial merchants' ability to meet current debt obligations was improved. Days payable outstanding fell again, to 21.2 days in 1984, slightly higher than for printing paper houses.

(See Exhibits 12B and 13 on page 20.)

EXHIBIT 12B

SOME ASSET MANAGEMENT PERFORMANCE GOALS

FOR INDUSTRIAL PAPER MERCHANT FIRMS

(Based on 1984 Business Conditions & Performances)

OVERALL ASSET MANAGEMENT	UPPER QUARTILE[1] OF ALL INDUSTRIAL PAPER FIRMS	MEDIAN[2] OF HIGH PROFIT (ROTA) GROUP
NET SALES TO TOTAL ASSETS (X)	5.24	3.98
INVENTORY MANAGEMENT		
INVENTORY TURNOVER (X)	9.95	7.72
GROSS MARGIN RETURN ON INVENTORY (%)	307.2	229.1
ACCOUNTS RECEIVABLE MANAGEMENT		
DAYS SALES IN ACCOUNTS RECEIVABLE ON NOV. 30 (DAYS)[3]	29.8	37.8

[1]The upper quartile is the value standing in the middle of the top half of the ordered values. In a set of about 100 values, the upper quartile is about 25th from the top.
[2]The median of the high profit group (See Appendix B for the ROTA Profit Groups) is the value standing in the middle of the top quarter of the ordered values. In a set of about 100 values, the median of the high profit group is about 12th from the top.
[3]This is a more precisely defined measure of collection period than Exhibit 12A's Average Collection Period which is based on sales for the year. Days Sales... is calculated by dividing credit sales for Oct. & Nov. by 61 to get a more accurate measure of average credit sales per day and then dividing this value into the trade notes and accounts receivable (after reserve for bad debts) on Nov. 30.

EXHIBIT 13

FINANCIAL MANAGEMENT MEASURES

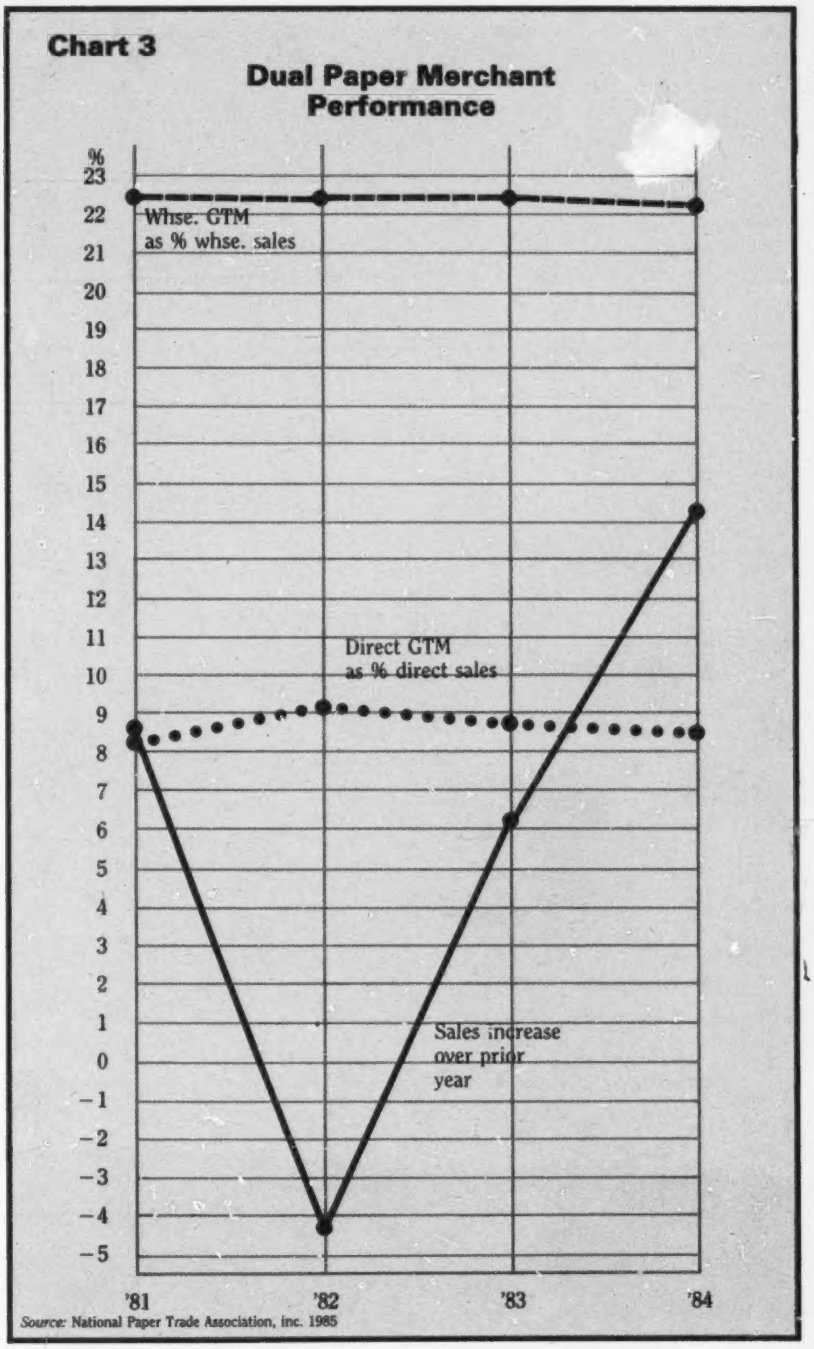
FOR INDUSTRIAL PAPER MERCHANTS

(All Values Are Medians)

FINANCIAL LEVERAGE	1979	1980	1981	1982	1983	1984
TOTAL DEBT TO NET WORTH (%)	108.7	111.2	88.5	88.2	90.6	102.5
CURRENT DEBT TO NET WORTH (%)	74.4	71.3	67.7	70.5	69.5	69.1
ABILITY TO PAY CURRENT DEBTS						
CURRENT ASSETS MINUS INVENTORY TO CURRENT DEBT (X)	1.24	1.32	1.38	1.34	1.43	1.46
DAYS PAYABLES OUTSTANDING ON DEC. 31 (DAYS)	25.1	23.3	22.3	21.3	21.7	21.2

CHAPTER FOUR:
DUAL PAPER MERCHANT PERFORMANCE

Dual paper merchants are distributors providing the full spectrum of paper products who obtain less than 80% of their total sales dollars from the sale of either printing or industrial papers. (See Appendix A for the characteristics of merchants studied in this report)



SALES PERFORMANCE

Exhibit 14 reports nine sales performance measures for dual paper merchants. As one can see, sales growth was strong in 1984, rising 14.2% in current dollars and 9% in "real" (inflation-adjusted) terms. Dual merchants have made a sharp turnaround since the 1982 downturn. By type of sales path, both warehouse and indirect sales accounted for smaller shares of total revenues, 56.2% and 7.3% respectively. Direct sales, as in industial and printing paper houses, increased to 36% of the total. This pattern has been occurring for the past two years.

The average warehouse order size rose 13.2% to $335. The average direct order size was up 11.7% to $3,024 and indirect orders moved up slightly to $584. By company size, dual firms in the $25 — 65 million range had the highest sales increase (see Table 4B, back of book, sales volume groups).

PROFITABILITY PERFORMANCE

The profit model in Exhibit 15 tracks the performance of the distribution firm (and industry) in view of its production of profit or increase in resources. See Appendix C for a discussion of the profit model. The model is very comprehensive and studies a firm's profit performance in sales management, the management of assets as resources used to generate these sales, and on the management of

EXHIBIT 14

SALES PERFORMANCE MEASURES FOR DUAL PAPER MERCHANTS

PERFORMANCE MEASURES	1975	1977	1978	1979	1980	1981	1982	1983	1984	Your Firm
% SALES CHANGE OVER PRIOR YEAR (%)	—	11.6	13.0	14.2	11.5	8.4	-4.2	6.5	14.2	
WAREHOUSE SALES[2] — % TOTAL SALES (%)	58.9	58.7	53.3	58.1	55.2	55.2	61.3	56.6	56.2	
INDIRECT SALES[2] — % TOTAL SALES (%)	—	—	6.8	7.1	6.4	7.2	8.0	7.8	7.3	
WHSE & IND SALES[2] — % TOTAL SALES (%)	—	—	59.6	63.1	61.7	62.0	68.8	64.5	63.9	
DIRECT SALES[2] — % TOTAL SALES (%)	—	—	40.4	36.9	38.4	38.0	31.2	35.5	36.1	
AVERAGE WAREHOUSE ORDER SIZE ($)	167	209	212	234	282	304	283	296	335	
AVERAGE INDIRECT ORDER SIZE ($)	—	—	513	535	624	635	548	577	584	
AVERAGE WHSE & IND ORDER SIZE ($)	—	—	222	248	298	319	298	296	320	
AVERAGE DIRECT ORDER SIZE ($)	1,693	2,110	2,266	2,424	2,796	2,948	2,193	2,708	3,024	

Sources: Values for 1976 and earlier: Price Waterhouse and NPTA.
Values for 1977 and later: Management Foresight, Inc.

[1]See Appendix B for a discussion of composite averages.
[2]As discussed in Appendix E, the addition of an "indirect sales" category reduced the comparability of the 1978, and later, sales values to the 1977, and earlier, results. However, the 1978 and later results are mutually comparable.

EXHIBIT 15

DUAL PAPER MERCHANTS' PROFIT MODEL PERFORMANCE[1]

(Composite Average Values)[2]

	(1) NET PROFIT BEFORE TAX / NET SALES (%)	×	(2) NET SALES / TOTAL ASSETS (X)	=	(3) NET PROFIT BEFORE TAX / TOTAL ASSETS (%)	×	(4) TOTAL ASSETS / NET WORTH (X)	=	(5) NET PROFIT BEFORE TAX / NET WORTH (%)	(6) RETURN ON CAPITAL EMPLOYED[3] (%)
1984	2.56		4.72		12.08		1.68		23.16	21.41
1983	2.50		4.30		10.74		1.76		20.41	18.20
1982	2.23		4.70		10.58		1.96		20.86	18.24
1981	3.13		4.64		14.55		1.85		23.95	21.28
1980	3.42		4.66		15.32		1.84		28.14	24.41
1979	3.41		4.32		14.22		1.87		26.56	23.72
1978	2.85		4.57		12.40		1.94		23.99	20.23
1977	2.65		4.53		12.29		1.90		23.40	20.72
1976	2.71		4.48		12.13		1.98		23.95	19.6
1975	3.53		4.29		15.16		2.29		34.71	25.5
1974	4.29		4.74		20.34		2.04		41.44	34.1

[1]See Appendix C for a discussion of the MFI Profit Model.
[2]The measures shown under column 1-5 are computed individually. Therefore, the values in column 3 are the result of dividing Net Profit Before Tax by Total Assets and are not the result of multiplying column 1's values by column 2's values; the values in column 5 are the result of dividing Net Profit Before Tax by Net Worth and are not the result of multiplying column 3's values by column 4's values.
[3]Return on Capital Employed was defined in 1977 and prior years as "net profit before taxes plus interest on borrowed funds minus income from outside investments" divided by "net worth, or owner's equity, plus long term debt minus outside investments." In 1978 and later years, Bank Loans Due in Less Than One Year was added to the denominator of the ratio (the capital invested) to recognize that some, if not most, of the total interest paid by the typical paper distributor resulted from bank loans. See Appendix D for a complete definition of the measures.

assets as they are subject to creditor/owner claims.

Like printing paper merchants, dual houses improved just about all profitability measures during 1984. Return On Net Sales (net profit before tax divided by net sales) rose to 2.56%, the best since 1981 and approaching 1976-78 levels. The Total Assets Turnover ratio (net sales divided by total assets) was, at 4.72 times, the highest since 1974. The all-important ROTA measure (Return On Total Assets--net profit before tax divided by total assets) was also at its highest level since 1981, 12.08% in 1984. Return On Net Worth (net profit before tax divided by net worth) rose to 23.16% (best since 1981) and Return On Capital Employed was up to 21.41%, the best figure since 1980. The ratio Total Assets to Net Worth was the only part of the profit model that fell, for the second consecutive year, to 1.68 times.

PROFIT MARGIN MANAGEMENT

Exhibit 16 presents ten key measures of profit margin management in three main areas: sales profitability performance, operating expense control, and personnel productivity.

Prior to 1978, merchant sales were studied in terms of two sales paths (i.e. warehouse sales and direct sales). Beginning with the report for 1978, merchants separated indirect sales from warehouse sales so that sales are now studied in terms of four paths—warehouse and direct sales as before and also for indirect and warehouse & indirect sales.

Warehouse gross profit margins dropped slightly to 22.3% during 1984, reaching a 10-year low. Indirect margins fell to 17.9% but this is still in line with the average since 1978. This was also the case with direct gross margins, which stayed the same at 8.7% of direct sales. This slight drop in gross margins is not bad, considering the 14% sales increase and improved profitability and asset turnover performance.

Operating expenses were cut for the second year in a row, to 86.9% of gross margin dollars. Employee compensation relative to gross margins was cut to 58.7% but *non-people* expenses rose to 28.9%, a five-year peak.

Net sales per employee rose 10.3% to $316,600 in 1984, while gross margin dollars generated per employee were up 8.6% to $54,300. Sales service and selling expenses were held in check, falling slightly to 36.4% of gross margins.

ASSET MANAGEMENT PERFORMANCE

Exhibit 17 provides a view of four key asset management performance measures. The most comprehensive of these, "Total Asset Turnover" (net sales to total assets) hit 4.72 times, the best in nine years. Dual merchants' inventory was turned over 6.43 times in 1984, 0.67 times more rapidly than the year before and also the highest since 1975. The average collection

period in 1984 was 40.5 days of receivables, a little longer than the historical average. All in all, dual merchants did a good job of improving their management of assets in 1984—a strong improvement in total assets turnover, coupled with better inventory turnover.

FINANCIAL MANAGEMENT

Exhibit 18 lists four measures of dual merchants' financial management. Apparently, dual merchants do not carry as much debt on their balance sheet as do printing and industrial paper houses. Total debt to net worth did rise to 58.7% in 1984, but this is still well below the 73.7% for printing paper and 102% for industrial. Current debt to net worth was cut to a six-year low of 40.9%, versus 69.5% and 69.1% for printing and industrial firms. The "Quick Ratio" (current assets minus inventory to current debt) was also improved substantially to 1.75 times, meaning that dual merchants

EXHIBIT 16

PROFIT MARGIN PERFORMANCE MEASURES FOR DUAL PAPER MERCHANTS

(All Values Are Composite Averages)

PROFITABILITY[1]	1975	1977	1978	1979	1980	1981	1982	1983	1984	Your Firm
WAREHOUSE GROSS MARGIN — % WHSE SALES (%)	24.5	22.3	22.4	23.4	23.6	22.6	22.7	22.8	22.3	
INDIRECT GROSS MARGIN — % INDIRECT SALES (%)	—	—	17.4	18.3	17.9	17.5	18.3	18.0	17.9	
WHSE & IND GROSS MARGIN — % WHSE & IND SALES (%)	—	—	22.6	22.9	23.1	22.3	22.3	22.3	21.9	
DIRECT GROSS MARGIN — % DIRECT SALES (%)	9.0	7.9	8.6	9.1	8.5	8.3	9.2	8.7	8.7	
OPERATING EXPENSE CONTROL										
OPERATING EXPENSE — % OF GROSS MARGIN (%)	81.0	84.5	83.2	82.1	81.4	83.1	87.8	87.4	86.9	
NON-PEOPLE EXPENSE — % OF GROSS MARGIN (%)	—	—	—	—	24.1	26.7	28.5	27.4	28.9	
TOTAL EMPLOYEE COMPENSATION — % GROSS MARGIN (%)	57.4	59.1	60.8	57.6	57.4	56.7	60.4	60.5	58.7	
PERSONNEL PRODUCTIVITY										
NET SALES PER EMPLOYEE ($000)	156	191	211	233	242.5	255.6	258.9	287.2	316.6	
GROSS MARGIN PER EMPLOYEE ($000)	—	31.5	35.2	40.7	44.1	46.7	47.0	50.0	54.3	
SALES SVC & SELL EXPENSE — % GROSS MARGIN (%)	33.7	34.7	34.1	33.3	35.2	36.1	36.7	36.5	36.4	

[1]This survey studied only warehouse and direct sales until indirect sales were separated and excluded from warehouse sales starting with data for 1978. Thus, the published values for 1977 and earlier years are not directly comparable with values for 1978 and later years. However, values for 1978 and later years are mutually comparable.

EXHIBIT 17

ASSET MANAGEMENT PERFORMANCE MEASURES FOR DUAL PAPER MERCHANTS

(All Values Are Composite Averages, Unless Otherwise Noted)

OVERALL ASSET MANAGEMENT	1975	1977	1978	1979	1980	1981	1982	1983	1984	Your Firm
NET SLS TO TOTAL ASSETS (X)	4.29	4.53	4.57	4.32	4.66	4.69	4.70	4.30	4.72	
INVENTORY MANAGEMENT										
INVENTORY TURNOVER (X)[1]	4.70	5.83	5.72	5.48	5.02	5.34	5.75	5.76	6.43	
GROSS MARGIN RETURN ON INVENTORY (%)[2]	152	174	165	167	155	156	169	170	185	
ACCOUNTS RECEIVABLE MANAGEMENT										
AVG. COLLECTION PERIOD (DAYS)[3] (Weighted Mean)	39	39.7	39.6	40.3	38.4	37.5	37.0	40.1	40.5	

[1]Inventory Turnover is calculated as Cost of Warehouse Goods Sold to Average Inventory (average of beginning and ending inventories for the year). However, remember that the definition of warehouse sales was narrowed to exclude indirect sales for 1978 and later years.
[2]Gross Margin Return On Inventory is defined as Gross Margin On Warehouse Sales divided by Average Inventory. Starting with the 1978 data, indirect sales were separated and excluded from warehouse sales. Thus, the above values for 1977 and earlier years are not directly comparable with the values for 1978 and later years. However, the values for 1978 and later years are mutually comparable.
[3]The calculation approach used for each measure is defined in Appendix D.

EXHIBIT 18

FINANCIAL MANAGEMENT MEASURES FOR DUAL PAPER MERCHANTS

(All Values Are Medians)

FINANCIAL LEVERAGE	1979	1980	1981	1982	1983	1984
TOTAL DEBT TO NET WORTH (%)	102.9	101.2	69.0	49.2	48.7	58.7
CURRENT DEBT TO NET WORTH (%)	74.4	76.4	52.5	46.2	46.4	40.9
ABILITY TO PAY CURRENT DEBTS						
CURRENT ASSETS MINUS INVENTORY TO CURRENT DEBT (X)	1.37	1.51	1.61	1.78	1.63	1.75
DAYS PAYABLES OUTSTANDING ON DEC. 31 (DAYS)	21.5	19.8	18.1	18.4	18.0	16.2

were in a better position to meet current debt obligations. Days payable outstanding was also cut to a seven-year low of 16.2 days in 1984. Referring to Table 6 (composite balance sheet, back tables of the book), accounts payable represented 22.85% of total dual merchants' assets, bank loans under one year represented 2.30%, and total current liabilities 32.65%—all lower than in 1983. Due to the faster inventory turnover, inventory constituted 32.25% of assets in 1984, compared to 36.05% in 1983.

LIST OF SUMMARY TABLES

1 MERCHANT COMMODITY GROUPS' PERFORMANCE MEASURES SUMMARIZING 1984 OPERATIONS

2A PRINTING PAPER MERCHANTS' PERFORMANCE MEASURES SUMMARIZING ALL FIRMS AND PROFITABILITY GROUPS

2B PRINTING PAPER MERCHANTS' PERFORMANCE MEASURES SUMMARIZING SALES VOLUME AND EMPHASIS GROUPS

2C PRINTING PAPER MERCHANTS' PERFORMANCE MEASURES SUMMARIZING NPTA REGIONAL GROUPS

3A INDUSTRIAL PAPER MERCHANTS' PERFORMANCE MEASURES SUMMARIZING ALL FIRMS AND PROFITABILITY GROUPS

3B INDUSTRIAL PAPER MERCHANTS' PERFORMANCE MEASURES SUMMARIZING SALES VOLUME AND EMPHASIS GROUPS

3C INDUSTRIAL PAPER MERCHANTS' PERFORMANCE MEASURES SUMMARIZING NPTA REGIONAL GROUPS

4A DUAL MERCHANTS' PERFORMANCE MEASURES SUMMARIZING ALL FIRMS AND PROFITABILITY GROUPS

4B DUAL MERCHANTS' PERFORMANCE MEASURES SUMMARIZING SALES VOLUME AND EMPHASIS GROUPS

4C DUAL MERCHANTS' PERFORMANCE MEASURES SUMMARIZING NPTA REGIONAL GROUPS

5 CONDENSED OPERATING STATEMENTS FOR PRINTING, INDUSTRIAL AND DUAL PAPER MERCHANTS

6 COMPOSITE BALANCE SHEETS FOR PRINTING, INDUSTRIAL AND DUAL PAPER MERCHANTS

ABBREVIATIONS USED IN TABLES

ACCTS REC	= ACCOUNTS RECEIVABLE
EXP	= EXPENSE
GM	= GROSS MARGIN, GROSS TRADING MARGIN
IND	= INDIRECT
INV	= INVENTORY
IP	= INDUSTRIAL PAPER
%	= PERCENT
PP	= PRINTING PAPER
NPBT	= NET PROFIT BEFORE TAXES
SLS	= SALES
WHSE	= WAREHOUSE

TABLE 1

MERCHANT COMMODITY GROUPS'* PERFORMANCE MEASURES** (COMPOSITE MEANS) SUMMARIZING 1984 OPERATIONS

PERFORMANCE MEASURE	ALL PRINTING PAPER MERCHANTS	ALL INDUSTRIAL PAPER MERCHANTS	ALL DUAL PAPER MERCHANTS
1. RETURN ON CAPITAL EMPLOYED (%)	21.28	13.32	21.41
2. NPBT AS % NET WORTH (%)	25.29	15.02	23.16
3. TOTAL ASSETS TO NET WORTH (X)	2.04	1.80	1.68
4. NPBT AS % TOTAL ASSETS (%)	12.20	8.20	12.08
5. NPBT AS % NET SALES (%)	2.63	1.96	2.56
6. NPBT AS % NET SALES (NON-LIFO ADJ; %) ...	2.76	2.00	2.71
7. NET SALES TO TOTAL ASSETS (X)	4.63	4.18	4.72
8. WHSE GM AS % WHSE SALES (%)	22.22	22.70	22.29
9. WHSE & IND GM AS % WHSE & IND SLS (%) ...	22.09	23.11	21.90
10. DIRECT GM AS % DIRECT SALES (%)	6.25	12.72	8.73
11. WHSE & IND SLS AS % TOTAL SLS (%)	46.06	71.86	63.95
12. % SLS CHANGE OVER PRIOR YEAR (%)	24.51	11.97	14.22
13. NET SALES PER EMPLOYEE ($000)	474.60	239.54	316.58
14. GM PER EMPLOYEE ($000)	64.42	48.39	54.25
15. PAYROLL AS % GM (%)	45.96	55.64	50.02
16. SLS SERVICE & SELLING EXP AS % GM (%) ...	36.37	38.91	36.44
17. OPERATING EXP AS % GM (%)	81.83	94.32	86.95
18. INV TURNOVER (WHSE ONLY; X)	4.93	6.32	6.43
19. GM RETURN ON INV (WHSE ONLY; %)	140.81	185.43	184.93
20. DAYS SLS IN ACCTS REC ON NOV 30 (DAYS) ..	41.52	36.52	39.55

*Appendix B sets forth the formation and measure of merchant commodity groups.

**Appendix D defines the performance measures.

TABLE 2A

PRINTING PAPER MERCHANTS' PERFORMANCE MEASURES* (COMPOSITE MEANS+) SUMMARIZING ALL FIRMS AND PROFITABILITY (ROTA**) GROUPS

PERFORMANCE MEASURE	YOUR FIRM	ALL PRINTING PAPER MERCHANTS	RETURN ON TOTAL ASSET GROUPS FOR ALL PRINTING PAPER MERCHANTS** LOW PROFIT GROUP	MIDDLE PROFIT GROUP	HIGH PROFIT GROUP
1. RETURN ON CAPITAL EMPLOYED (%)		21.28	12.37	21.71	25.78
2. NPBT AS % NET WORTH (%)		25.29	13.35	25.56	26.81
3. TOTAL ASSETS TO NET WORTH (X)		2.04	4.94	2.03	1.50
4. NPBT AS % TOTAL ASSETS (%)		12.20	2.14	12.51	17.83
5. NPBT AS % NET SALES (%)		2.63	0.47	2.69	3.98
6. NPBT AS % NET SALES (NON-LIFO ADJ;%)		2.76	0.63	2.78	4.16
7. NET SALES TO TOTAL ASSETS (X)		4.63	4.58	4.66	4.48
8. WHSE GM AS % WHSE SALES (%)		22.22	19.15	22.23	23.88
9. WHSE & IND GM AS % WHSE & IND SLS (%)		22.09	18.81	22.28	23.17
10. DIRECT GM AS % DIRECT SALES (%)		6.25	6.37	6.15	6.58
11. WHSE & INDIRECT SALES AS % TOTAL SALES (%)		46.06	37.54	47.78	47.33
12. % SALES CHANGE OVER PRIOR YEAR (%)		24.51	24.35	23.68	28.65
13. NET SALES PER EMPLOYEE ($000)		474.60	491.04	460.91	503.43
14. GM PER EMPLOYEE ($000)		64.42	54.20	64.75	70.65
15. PAYROLL AS % GM (%)		45.96	50.27	46.67	41.86
16. SALES SERVICE & SELLING EXP AS % GM (%)		36.37	40.72	36.03	34.66
17. TOTAL OPERATING EXP AS % GM (%)		81.83	90.34	82.07	76.73
18. INV TURNOVER (WHSE ONLY; X)		4.93	5.99	4.86	4.62
19. GM RETURN ON INV (WHSE ONLY; %)		140.81	141.85	138.96	144.90
20. DAY SALES IN ACCTS REC ON NOV 30 (DAYS)		41.52	46.73	40.12	41.25

*Appendix D defines the performance measures.

+These composite mean values are mutually comparable, however comparisons with previous years' median values should be made with caution.

**Appendix B sets forth the formation and measure of profitability groups, namely, of Return on Total Assets (ROTA) groups.

TABLE 2B

PRINTING PAPER MERCHANTS' PERFORMANCE MEASURES* (COMPOSITE MEANS+) SUMMARIZING SALES VOLUME AND EMPHASIS GROUPS**

PERFORMANCE MEASURE	YOUR FIRM	SALES VOLUME GROUPS				WAREHOUSE, INDIRECT & DIRECT SALES EMPHASIS GROUPS			
		UNDER $8MM	$8 TO $15MM	$15 TO $ 50MM	$50MM & OVER	OVER 65% DIRECT	35-55% WHSE & INDIRECT	55-75% WHSE & INDIRECT	75 + % WHSE & INDIRECT
1. RETURN ON CAPITAL EMPLOYED (%)		8.10	14.81	21.23	22.15	20.72	23.13	21.09	19.03
2. NPBT AS % NET WORTH (%)		8.34	15.53	21.57	27.58	31.21	23.00	27.61	21.04
3. TOTAL ASSETS TO NET WORTH (X)		2.00	1.59	1.61	2.19	3.34	1.87	1.94	1.50
4. NPBT AS % TOTAL ASSETS (%)		0.46	9.74	12.66	12.60	9.41	12.01	14.06	13.56
5. NPBT AS % NET SALES (%)		0.11	2.23	2.70	2.71	1.63	2.67	3.26	3.97
6. NPBT AS % NET SALES (NON-LIFO ADJ;%)		0.09	2.37	3.01	2.80	1.72	2.77	3.34	4.35
7. NET SALES TO TOTAL ASSETS (X)		4.24	4.37	4.68	4.66	5.79	4.50	4.31	3.42
8. WHSE GM AS % WHSE SALES (%)		23.51	23.06	23.34	21.91	19.15	21.84	23.24	22.31
9. WHSE & IND GM AS % WHSE & IND SLS (%)		22.71	21.76	22.24	22.08	21.37	21.74	22.56	22.32
10. DIRECT GM AS % DIRECT SALES (%)		7.82	7.30	6.22	6.17	6.06	5.95	7.04	7.21
11. WHSE & INDIRECT SALES AS % TOTAL SALES (%) ...		66.46	58.83	49.73	43.93	20.34	45.58	61.17	86.25
12. % SALES CHANGE OVER PRIOR YEAR (%)		15.86	15.64	22.97	25.75	31.26	23.44	21.03	21.77
13. NET SALES PER EMPLOYEE ($000)		268.45	377.78	452.41	498.85	774.80	536.37	371.67	239.14
14. GM PER EMPLOYEE ($000)		47.55	59.71	64.20	65.71	71.71	70.53	61.46	49.59
15. PAYROLL AS % GM (%)		49.43	46.47	45.34	45.91	47.71	46.13	43.72	48.21
16. SALES SERVICE & SELLING EXP AS % GM (%)		36.56	37.48	35.39	36.48	44.01	33.64	33.55	39.16
17. TOTAL OPERATING EXP AS % GM (%)		94.11	85.98	83.30	80.77	82.74	81.24	81.65	82.22
18. INV TURNOVER (WHSE ONLY; X)		5.56	5.07	5.34	4.83	6.51	5.01	4.60	4.87
19. GM RETURN ON INV (WHSE ONLY; %)		170.92	152.05	162.80	135.51	154.29	139.97	139.14	139.91
20. DAY SALES IN ACCTS REC ON NOV 30 (DAYS)		40.55	42.04	45.47	40.77	42.85	40.95	40.50	43.43

*Appendix D defines the performance measures.
+These composite mean values are mutually comparable, however comparisons with previous years' median values should be made with caution.
**Appendix B sets forth the formation and measure of sales volume and emphasis groups.

TABLE 2C
PRINTING PAPER MERCHANTS'
PERFORMANCE MEASURES* (COMPOSITE MEANS**)
SUMMARIZING NPTA REGIONAL GROUPS

NPTA REGIONS

Region 1: CT, ME, MA, NH, RI & VT
Region 2: DE, DC, MD, NJ, NY & PA
Region 3: AL, FL, GA, NC, SC, TN & VA
Region 4: KY, MI, OH & WV
Region 5: CO, IA, KS, MN, MT, NE, ND, SD & WY
Region 6: AK, AZ, CA, HI, ID, NV, NM, OR, UT & WA
Region 7: AR, LA, MS, OK & TX
Region 8: WI, IL, IN & MO

PERFORMANCE MEASURE	YOUR FIRM	REGIONAL GROUPS FOR ALL PRINTING PAPER MERCHANTS							
		REGION 1	REGION 2	REGION 3	REGION 4	REGION 5	REGION 6	REGION 7	REGION 8
1. RETURN ON CAPITAL EMPLOYED (%)		26.46	20.93	19.63	23.22	25.44	20.93	NC+	28.22
2. NPBT AS % NET WORTH (%)		26.70	24.36	22.04	18.39	28.72	21.33	NC+	28.95
3. TOTAL ASSETS TO NET WORTH (X)		1.79	2.04	1.70	1.46	1.68	1.63	NC+	1.78
4. NPBT AS % TOTAL ASSETS (%)		13.72	11.96	13.03	11.78	17.15	13.12	NC+	14.50
5. NPBT AS % NET SALES (%)		2.90	2.24	3.20	2.19	3.97	2.93	NC+	2.93
6. NPBT AS % NET SALES (NON-LIFO ADJ;%)		2.95	2.42	3.63	2.36	3.99	2.98	NC+	3.08
7. NET SALES TO TOTAL ASSETS (X)		4.74	5.33	4.07	5.38	4.32	4.48	NC+	4.95
8. WHSE GM AS % WHSE SALES (%)		NC+	22.16	21.74	23.54	25.43	22.00	NC+	25.44
9. WHSE & IND GM AS % WHSE & IND SLS (%)		21.67	22.77	21.06	21.53	24.76	21.51	NC+	24.63
10. DIRECT GM AS % DIRECT SALES (%)		7.09	5.90	6.63	7.04	NC+	5.31	NC+	6.44
11. WHSE & INDIRECT SALES AS % TOTAL SALES (%)		54.96	30.10	66.59	47.32	57.21	50.32	NC+	42.04
12. % SALES CHANGE OVER PRIOR YEAR (%)		21.89	27.48	29.31	29.68	17.64	23.92	NC+	20.77
13. NET SALES PER EMPLOYEE ($000)		461.20	611.11	327.43	471.77	364.73	528.64	NC+	506.70
14. GM PER EMPLOYEE ($000)		69.67	69.18	50.51	65.57	63.03	71.16	NC+	71.38
15. PAYROLL AS % GM (%)		43.78	45.06	44.71	46.51	44.68	45.05	NC+	45.91
16. SALES SERVICE & SELLING EXP AS % GM (%)		34.08	39.28	35.64	37.49	34.22	30.26	NC+	38.31
17. TOTAL OPERATING EXP AS % GM (%)		79.58	82.07	82.95	86.02	78.75	83.65	NC+	79.74
18. INV TURNOVER (WHSE ONLY; X)		NC+	6.07	5.15	5.84	4.13	4.63	NC+	4.21
19. GM RETURN ON INV (WHSE ONLY; %)		NC+	172.72	143.07	179.82	140.79	130.64	NC+	143.62
20. DAY SALES IN ACCTS REC ON NOV 30 (DAYS)		43.90	40.17	42.17	43.42	41.21	43.47	NC+	41.04

*Appendix D defines the performance measures.

**These composite mean values are mutually comparable, however comparisons with previous years' median values should be made with caution.

+Not calculated if less than four firms reported data.

TABLE 3A

INDUSTRIAL PAPER MERCHANTS' PERFORMANCE MEASURES* (COMPOSITE MEANS) SUMMARIZING ALL FIRMS AND PROFITABILITY (ROTA**) GROUPS

PERFORMANCE MEASURE	YOUR FIRM	ALL INDUSTRIAL PAPER MERCHANTS (WEIGHTED MEAN)	RETURN ON TOTAL ASSET GROUPS FOR ALL INDUSTRIAL PAPER MERCHANTS** LOW PROFIT GROUP	MIDDLE PROFIT GROUP	HIGH PROFIT GROUP
1. RETURN ON CAPITAL EMPLOYED (%)		13.32	1.68	13.89	36.94
2. NPBT AS % NET WORTH (%)		15.02	1.51	15.93	41.93
3. TOTAL ASSETS TO NET WORTH (X)		1.80	1.56	2.06	1.91
4. NPBT AS % TOTAL ASSETS (%)		8.20	0.85	7.75	22.01
5. NPBT AS % NET SALES (%)		1.96	0.21	2.02	4.48
6. NPBT AS % NET SALES (NON-LIFO ADJ;%)		2.00	0.25	2.04	4.51
7. NET SALES TO TOTAL ASSETS (X)		4.18	4.10	3.83	4.92
8. WHSE GM AS % WHSE SLS (%)		22.70	20.32	24.28	24.79
9. WHSE & IND GM AS % WHSE & IND SLS (%)		23.11	20.58	23.50	25.57
10. DIRECT GM AS % DIRECT % SLS (%)		12.72	10.28	13.36	15.84
11. WHSE & IND SLS AS % TOTAL SLS (%)		71.86	67.24	75.19	73.71
12. % SLS CHANGE OVER PRIOR YEAR (%)		11.97	10.35	10.70	16.24
13. NET SALES PER EMPLOYEE ($000)		239.54	279.35	206.37	246.73
14. GM PER EMPLOYEE ($000)		48.39	48.54	43.67	56.62
15. TOTAL PAYROLL AS % GM (%)		55.64	57.80	55.54	54.73
16. SLS SERVICE & SELLING EXP AS % GM (%)		38.91	41.62	36.50	39.21
17. TOTAL OPERATING EXP AS % GM (%)		94.32	105.36	92.31	84.15
18. INV TURNOVER (WHSE ONLY; X)		6.32	5.31	6.73	8.72
19. GM RETURN ON INV (WHSE ONLY, %)		185.43	135.46	218.55	287.16
20. DAY SLS IN ACCTS REC ON NOV 30 (DAYS)		36.52	41.63	38.59	28.73

*Appendix D defines the performance measures.

**Appendix B sets forth the formation and measure of profitability groups, namely, of Return on Total Assets (ROTA) groups.

TABLE 3B

INDUSTRIAL PAPER MERCHANTS' PERFORMANCE MEASURES* (COMPOSITE MEANS) SUMMARIZING SALES VOLUME AND EMPHASIS GROUPS**

PERFORMANCE MEASURE	YOUR FIRM	SALES VOLUME GROUPS					WAREHOUSE-INDIRECT SALES EMPHASIS GROUPS		
		UNDER $3.0MM	$3.0 TO $6.0MM	$6.0 TO $12MM	$12MM TO $25MM	OVER $25MM	UNDER 75% WHSE & INDIRECT	75% TO 90% WHSE & INDIRECT	90% & OVER WHSE & INDIRECT
1. RETURN ON CAPITAL EMPLOYED (%)		7.44	15.54	13.11	22.56	10.94	12.33	14.88	18.62
2. NPBT AS % NET WORTH (%)		11.58	29.68	16.39	25.35	11.90	13.53	17.96	21.02
3. TOTAL ASSETS TO NET WORTH (X)		1.49	2.69	2.16	2.00	1.69	1.72	1.94	1.94
4. NPBT AS % TOTAL ASSETS (%)		6.88	8.80	7.34	12.67	7.05	7.78	8.91	10.64
5. NPBT AS % NET SALES (%)		2.33	2.22	1.73	2.80	1.70	1.81	2.42	2.47
6. NPBT AS % NET SALES (NON-LIFO ADJ;%)		2.60	2.28	1.80	2.88	1.71	1.83	2.48	2.56
7. NET SALES TO TOTAL ASSETS (X)		2.96	4.08	4.24	4.52	4.13	4.30	3.67	4.30
8. WHSE GM AS % WHSE SLS (%)		NC+	24.41	24.61	21.61	22.58	22.26	24.88	21.01
9. WHSE & IND GM AS % WHSE & IND SLS (%)		23.45	24.25	25.18	22.53	22.75	22.90	24.62	22.02
10. DIRECT GM AS % DIRECT SLS (%)		12.29	11.55	16.71	15.27	11.46	12.59	13.43	13.80
11. WHSE & IND SLS AS % TOTAL SLS (%)		94.45	79.86	77.44	73.44	68.74	63.21	83.02	95.02
12. % SLS CHANGE OVER PRIOR YEAR (%)		23.90	15.85	12.80	10.41	11.65	11.65	10.68	14.03
13. NET SALES PER EMPLOYEE ($000)		152.11	199.85	203.24	251.21	255.80	277.68	174.22	216.91
14. GM PER EMPLOYEE ($000)		36.39	43.45	47.97	50.52	49.17	52.86	39.87	46.09
15. TOTAL PAYROLL AS % GM (%)		57.73	54.68	54.79	54.05	56.41	56.28	54.66	52.93
16. SLS SERVICE & SELLING EXP AS % GM (%)		38.01	39.56	37.47	38.76	39.29	40.93	35.42	33.91
17. TOTAL OPERATING EXP AS % GM (%)		92.84	89.80	93.13	88.74	96.99	96.47	91.27	88.57
18. INV TURNOVER (WHSE ONLY; X)		NC+	6.48	7.11	9.16	5.63	5.46	6.48	9.66
19. GM RETURN ON INV (WHSE ONLY, %)		NC+	209.10	241.42	248.31	164.05	155.72	215.35	255.46
20. DAY SLS IN ACCTS REC ON NOV. 30 (DAYS)		40.73	31.52	43.34	27.40	39.64	37.28	34.59	34.30

*Appendix D defines the performance measures.

**Appendix B sets forth the formation and measure of sales volume and emphasis groups.

TABLE 3C

INDUSTRIAL PAPER MERCHANTS' PERFORMANCE MEASURES* (COMPOSITE MEANS) SUMMARIZING NPTA REGIONAL GROUPS

NPTA Regions

REGION 1: CT, ME, MA, NH, RI, & VT
REGION 2: DE, DC, MD, NJ, NY, & PA
REGION 3: AL, FL, GA, NC, SC, TN & VA
REGION 4: KY, MI, OH, & WV
REGION 5: CO, IA, KS, MN, MT, NE, ND, SD & WY
REGION 6: AK, AZ, CA, HI, ID, NV, NM, OR, UT & WA
REGION 7: AR, LA, MS, OK, & TX
REGION 8: WI, IL, IN & MO

PERFORMANCE MEASURE	YOUR FIRM	REGIONAL GROUPS FOR ALL INDUSTRIAL PAPER MERCHANTS REGION 1	REGION 2	REGION 3	REGION 4	REGION 5	REGION 6	REGION 7	REGION 8
1. RETURN ON CAPITAL EMPLOYED (%)		NC+	19.14	24.32	15.44	23.96	8.39	9.93	20.71
2. NPBT AS % NET WORTH (%)		12.17	24.48	-26.87	16.16	21.31	8.97	11.81	26.96
3. TOTAL ASSETS TO NET WORTH (X)		2.06	2.02	1.88	1.71	1.58	1.59	1.89	2.45
4. NPBT AS % TOTAL ASSETS (%)		5.90	11.43	13.96	9.48	12.29	5.57	6.24	11.02
5. NPBT AS % NET SALES (%)		1.46	2.69	2.96	2.64	2.77	1.28	1.72	2.51
6. NPBT AS % NET SALES (NON-LIFO ADJ;%)		1.46	2.72	2.97	2.68	3.18	1.29	1.74	2.60
7. NET SALES TO TOTAL ASSETS (X)		4.03	4.26	4.71	3.58	4.42	4.33	3.62	4.38
8. WHSE GM AS % WHSE SLS (%)		NC+	23.31	23.16	NC+	NC+	21.65	NC+	24.33
9. WHSE & IND GM AS % WHSE & IND SLS (%)		NC+	24.25	23.33	23.84	21.79	22.28	NC+	22.97
10. DIRECT GM AS % DIRECT SLS (%)		NC+	11.70	12.82	NC+	12.03	12.30	NC+	13.88
11. WHSE & IND SLS AS % TOTAL SLS (%)		NC+	76.66	75.74	78.17	91.87	63.85	NC+	67.91
12. % SLS CHANGE OVER PRIOR YEAR (%)		18.45	10.70	18.27	14.62	13.46	11.69	9.44	12.95
13. NET SALES PER EMPLOYEE ($000)		164.38	222.39	200.17	243.70	243.32	292.80	NC+	267.37
14. GM PER EMPLOYEE ($000)		38.74	47.92	37.82	54.69	51.09	54.85	NC+	53.62
15. TOTAL PAYROLL AS % GM (%)		NC+	51.95	57.99	56.51	54.63	59.07	55.41	55.74
16. SLS SERVICE & SELLING EXP AS % GM (%)		NC+	34.61	40.15	44.72	34.66	41.82	NC+	44.75
17. TOTAL OPERATING EXP AS % GM (%)		94.82	89.24	88.24	90.44	91.66	100.27	94.06	90.20
18. INV TURNOVER (WHSE ONLY; X)		NC+	9.10	NC+	NC+	NC+	5.38	NC+	6.94
19. GM RETURN ON INV (WHSE ONLY; %)		NC+	276.83	NC+	NC+	NC+	148.67	NC+	232.92
20. DAYS SLS IN ACCTS REC ON NOV. 30 (DAYS)		NC+	38.09	33.92	39.44	22.69	42.39	NC+	22.32

*Appendix D defines the performance measures.

+Not calculated if less than four data provided.

TABLE 4A

DUAL MERCHANTS' PERFORMANCE MEASURES* (COMPOSITE MEANS) SUMMARIZING ALL FIRMS AND PROFITABILITY (ROTA**) GROUPS

PERFORMANCE MEASURE	YOUR FIRM	ALL DUAL PAPER MERCHANTS	RETURN ON TOTAL ASSET GROUPS FOR ALL DUAL PAPER MERCHANTS** LOW PROFIT GROUP	MIDDLE PROFIT GROUP	HIGH PROFIT GROUP
1. RETURN ON CAPITAL EMPLOYED (%)		21.41	4.98	18.94	33.66
2. NPBT AS % NET WORTH (%)		23.16	0.48	20.94	34.62
3. TOTAL ASSETS TO NET WORTH (X)		1.68	1.70	1.71	1.58
4. NPBT AS % TOTAL ASSETS (%)		12.08	3.34	12.25	21.93
5. NPBT AS % NET SALES (%)		2.56	0.74	2.69	3.98
6. NPBT AS % NET SALES (NON-LIFO ADJ;%)		2.71	0.82	2.92	4.00
7. NET SALES TO TOTAL ASSETS (X)		4.72	4.51	4.56	5.51
8. WHSE GM AS % WHSE SALES (%)		22.29	20.27	23.14	22.94
9. WHSE & IND GM AS % WHSE & IND SLS (%)		21.90	20.15	22.46	22.66
10. DIRECT GM AS % DIRECT SLS (%)		8.73	8.87	8.41	9.30
11. WHSE & IND SLS AS % TOTAL SLS (%)		63.95	78.78	61.47	55.60
12. % SLS CHANGE OVER PRIOR YEAR (%)		14.22	11.02	15.47	14.05
13. NET SALES PER EMPLOYEE ($000)		316.58	257.57	323.26	382.88
14. GM PER EMPLOYEE ($000)		54.25	45.92	55.03	64.06
15. TOTAL PAYROLL AS % GM (%)		50.02	52.90	50.64	45.58
16. SLS SERVICE & SELLING EXP AS % GM (%)		36.44	34.77	37.51	35.24
17. TOTAL OPERATING EXP AS % GM (%)		86.95	97.08	86.11	78.69
18. INV TURNOVER (WHSE ONLY; X)		6.43	6.36	6.63	6.09
19. GM RETURN ON INV (WHSE ONLY; %)		184.93	162.24	199.40	181.30
20. DAYS SLS IN ACCTS REC ON NOV. 30 (DAYS)		39.55	40.85	39.18	39.31

*Appendix D defines the performance measures.

**Appendix B sets forth the formation and measure of profitability groups, namely, of Return on Total Assets (ROTA) groups.

TABLE 4B

DUAL MERCHANTS' PERFORMANCE MEASURES* (COMPOSITE MEANS) SUMMARIZING SALES VOLUME AND EMPHASIS GROUPS**

PERFORMANCE MEASURE	YOUR FIRM	SALES VOLUME GROUPS				WAREHOUSE-INDIRECT SALES EMPHASIS GROUPS		
		UNDER $10MM	$10MM TO $25MM	$25MM TO $65MM	$65MM & OVER	UNDER 65% WHSE & INDIRECT	65% TO 80% WHSE & INDIRECT	80% & OVER WHSE & INDIRECT
1. RETURN ON CAPITAL EMPLOYED (%)		11.08	18.59	21.37	23.15	25.20	18.91	17.57
2. NPBT AS % NET WORTH (%)		9.51	19.05	23.58	25.73	28.09	20.39	17.24
3. TOTAL ASSETS TO NET WORTH (X)		1.45	1.48	1.69	1.75	1.85	1.55	1.67
4. NPBT AS % TOTAL ASSETS (%)		5.52	11.62	14.00	11.85	15.20	12.70	6.45
5. NPBT AS % NET SALES (%)		1.37	2.00	3.21	2.49	2.68	3.08	1.52
6. NPBT AS % NET SALES (NON-LIFO ADJ;%)		1.61	2.01	3.35	2.68	2.84	3.25	1.62
7. NET SALES TO TOTAL ASSETS (X)		4.03	5.80	4.36	4.75	5.68	4.12	4.24
8. WHSE GM AS % WHSE SLS (%)		22.60	22.06	23.25	22.05	21.50	23.71	21.56
9. WHSE & IND GM AS % WHSE & IND SLS (%)		22.62	21.71	22.88	21.50	21.21	22.90	21.29
10. DIRECT GM AS % DIRECT SLS (%)		10.68	9.33	8.80	8.50	8.32	9.29	9.92
11. WHSE & IND SLS AS % TOTAL SLS (%)		73.28	66.76	63.57	62.88	47.46	73.04	82.87
12. % SLS CHANGE OVER PRIOR YEAR (%)		10.70	10.20	17.27	14.22	17.13	12.75	11.00
13. NET SALES PER EMPLOYEE ($000)		234.70	317.70	313.98	325.88	439.39	264.93	242.34
14. GM PER EMPLOYEE ($000)		46.11	55.42	55.73	54.14	63.43	51.90	46.95
15. TOTAL PAYROLL AS % GM (%)		51.61	47.42	47.15	51.84	48.92	49.27	52.73
16. SLS SERVICE & SELLING EXP AS % GM (%)		37.25	38.70	36.11	36.04	37.49	36.44	34.87
17. TOTAL OPERATING EXP AS % GM (%)		94.78	89.62	83.96	87.00	82.91	86.24	94.01
18. INV TURNOVER (WHSE ONLY; X)		6.33	6.26	6.25	6.53	7.19	5.91	6.27
19. GM RETURN ON INV (WHSE ONLY; %)		191.36	178.73	189.32	184.79	196.90	184.96	172.61
20. DAYS SLS IN ACCTS REC ON NOV. 30 (DAYS)		37.02	39.52	38.65	40.05	39.96	39.02	39.55

*Appendix D defines the performance measures.

**Appendix B sets forth the formation and measure of sales volume and emphasis groups.

TABLE 4C
DUAL PAPER MERCHANTS'
PERFORMANCE MEASURES* (COMPOSITE MEANS)
SUMMARIZING NPTA REGIONAL GROUPS

NPTA REGIONS

REGION 1: CT, ME, MA, NH, RI & VT
REGION 2: DE, DC, MD, NJ, NY & PA
REGION 3: AL, FL, GA, NC, SC, TN & VA
REGION 4: KY, MI, OH & WV
REGION 5: CO, IA, KS, MN, MT, NE, ND, SD & WY
REGION 6: AK, AZ, CA, HI, ID, NV, NM, OR, UT & WA
REGION 7: AR, LA, MS, OK & TX
REGION 8: WI, IL, IN & MO

PERFORMANCE MEASURE	YOUR FIRM	REGIONAL GROUPS FOR ALL DUAL PAPER MERCHANTS REGION 1	REGION 2	REGION 3	REGION 4	REGION 5	REGION 6	REGION 7	REGION 8
1. RETURN ON CAPITAL EMPLOYED (%)		NC+	NC+	15.01	18.10	21.90	NC+	20.09	21.98
2. NPBT AS % NET WORTH (%)		NC+	NC+	16.09	16.90	22.23	NC+	21.09	23.86
3. TOTAL ASSETS TO NET WORTH (X)		NC+	NC+	1.66	1.52	1.62	NC+	1.47	1.61
4. NPBT AS % TOTAL ASSETS (%)		NC+	NC+	9.09	11.13	13.72	NC+	13.38	14.87
5. NPBT AS % NET SALES (%)		NC+	NC+	1.93	2.28	2.58	NC+	3.68	3.23
6. NPBT AS % NET SALES (NON-LIFO ADJ;%)		NC+	NC+	2.09	2.30	2.95	NC+	3.69	3.40
7. NET SALES TO TOTAL ASSETS (X)		NC+	NC+	4.71	4.88	5.32	NC+	3.64	4.61
8. WHSE GM AS % WHSE SLS (%)		NC+	NC+	22.88	21.71	NC+	NC+	24.73	20.70
9. WHSE & IND GM AS % WHSE & IND SLS (%)		NC+	NC+	22.89	21.45	22.62	NC+	24.35	20.32
10. DIRECT GM AS % DIRECT SLS (%)		NC+	NC+	10.77	8.96	9.97	NC+	9.60	8.78
11. WHSE & IND SLS AS % TOTAL SLS (%)		NC+	NC+	71.55	62.78	74.50	NC+	76.66	51.30
12. % SLS CHANGE OVER PRIOR YEAR (%)		NC+	NC+	13.32	13.64	14.15	NC+	10.44	18.85
13. NET SALES PER EMPLOYEE ($000)		NC+	NC+	240.18	343.30	296.61	NC+	238.31	412.68
14. GM PER EMPLOYEE ($000)		NC+	NC+	46.70	57.68	57.74	NC+	49.82	60.67
15. TOTAL PAYROLL AS % GM (%)		NC+	NC+	52.12	44.72	51.21	NC+	49.15	47.96
16. SLS SERVICE & SELLING EXP AS % GM (%)		NC+	NC+	41.66	36.42	39.93	NC+	32.85	35.94
17. TOTAL OPERATING EXP AS % GM (%)		NC+	NC+	91.48	87.76	89.58	NC+	84.42	82.61
18. INV TURNOVER (WHSE ONLY; X)		NC+	NC+	6.10	6.69	NC+	NC+	4.39	5.84
19. GM RETURN ON INV (WHSE ONLY; %)		NC+	NC+	185.38	187.80	NC+	NC+	144.30	152.41
20. DAYS SLS IN ACCTS REC ON NOV. 30 (DAYS)		NC+	NC+	39.23	40.90	36.76	NC+	39.26	36.44

*Appendix D defines the performance measures.
+Not calculated if less than four data provided.

TABLE 5

CONDENSED OPERATING STATEMENTS FOR PRINTING, INDUSTRIAL & DUAL PAPER MERCHANTS
(WEIGHTED MEANS & MEDIANS -- % OF NET SALES*)

OPERATING STATEMENT	ALL PRINTING PAPER MERCHANTS		ALL INDUSTRIAL PAPER MERCHANTS		ALL DUAL PAPER MERCHANTS	
	WEIGHTED MEAN	MEDIAN	WEIGHTED MEAN	MEDIAN	WEIGHTED MEAN	MEDIAN
TOTAL SALES (%)	100.00	100.00	100.00	100.00	100.00	100.00
TOTAL COST OF GOODS SOLD (%)	86.50	84.86	79.57	77.68	82.83	82.60
GROSS TRADING MARGIN (%)	13.50	15.15	20.43	22.32	17.17	17.41
TOTAL OPERATING EXPENSES (%)	11.05	12.79	19.27	20.57	14.91	15.37
NET OPERATING PROFIT (%)	2.45	2.16	1.16	1.79	2.23	2.01
FINANCIAL GAINS						
CASH DISCOUNTS EARNED (%)	1.47	1.44	1.08	1.06	1.27	1.23
INCOME FROM OUTSIDE INVESTMENTS (%)	0.02	0.00	0.11	0.00	0.03	0.00
ALL OTHER GAINS (%)	0.27	0.14	0.61	0.23	0.23	0.09
TOTAL FINANCIAL GAINS (%)	1.75	1.64	1.77	1.35	1.53	1.40
FINANCIAL LOSSES						
CASH DISCOUNTS ALLOWED (%)	1.14	1.13	0.47	0.41	0.96	0.95
INTEREST ON BORROWED CAPITAL (%)	0.57	0.35	0.60	0.56	0.33	0.39
ALL OTHER LOSSES (%)	0.05	0.00	0.25	0.00	0.04	0.00
TOTAL FINANCIAL LOSSES (%)	1.52	1.46	0.94	0.83	1.20	1.03
NET FINANCIAL GAIN OR LOSS (%)	0.19	0.12	0.83	0.57	0.33	0.24
NET PROFIT BEFORE TAXES (%)	2.63	2.23	1.96	2.00	2.56	2.23
CORPORATE INCOME TAXES (%)	1.20	1.10	1.09	0.56	1.41	1.11
NET PROFIT AFTER TAXES (%)	1.24	1.20	1.48	1.25	1.47	1.24

*The percentages may not add to exactly 100% because some firms did not report some items.

TABLE 6

COMPOSITE BALANCE SHEETS FOR PRINTING, INDUSTRIAL & DUAL PAPER MERCHANTS
(WEIGHTED MEANS AS % OF TOTAL ASSETS*)

BALANCE SHEET	ALL PRINTING PAPER MERCHANTS	ALL INDUSTRIAL PAPER MERCHANTS	ALL DUAL PAPER MERCHANTS
ASSETS			
CASH & MARKETABLE SECURITIES (%)	0.48	4.24	-1.98
ACCOUNTS & NOTES RECEIVABLE, TRADE (%)	54.58	46.42	55.54
INVENTORY (%)	30.17	32.31	32.25
OTHER CURRENT ASSETS (%)	2.42	1.71	3.27
TOTAL CURRENT ASSETS (%)	87.48	84.69	89.09
NET FIXED ASSETS (%)	9.52	12.32	9.25
OUTSIDE INVESTMENTS (%)	1.70	0.89	0.33
OTHER NON-CURRENT ASSETS (%)	1.40	2.10	1.39
TOTAL ASSETS (%)	100.00	100.00	100.00
LIABILITIES AND NET WORTH			
ACCOUNTS PAYABLE (%)	26.71	21.49	22.85
BANK LOANS (LESS THAN ONE YEAR) (%)	4.37	2.02	2.30
OTHER CURRENT LIABILITIES (%)	6.14	12.00	7.61
TOTAL CURRENT LIABILITIES (%)	37.21	35.52	32.65
LONG TERM LIABILITIES (%)	16.57	9.03	18.07
CAPITAL & SURPLUS (EQUITY) (%)	47.27	55.72	58.63
TOTAL LIABILITIES & NET WORTH (%)	100.00	100.00	100.00

*The percentages may not add to exactly 100% because some firms did not report some items.

APPENDIX A

CHARACTERISTICS OF THE PARTICIPANTS

IN THE NPTA/MFI 1980-84 ANNUAL PERFORMANCE SURVEYS

MEDIAN SALES OF PARTICIPANTS ($000)

SURVEY YEAR	1980	1981	1982	1983	1984
PRINTING EMPHASIS	$16,096	$14,612	$16,895	$18,182	$24,634
INDUSTRIAL EMPHASIS	6,440	6,727	7,488	9,730	8,189
DUAL EMPHASIS	14,428	12,539	12,532	15,048	17,074

TOTAL SALES OF PARTICIPANTS ($000)

SURVEY YEAR	1980	1981	1982	1983	1984
PRINTING EMPHASIS	$2,666,498	$2,476,786	$3,110,473	$3,512,794	$4,221,325
INDUSTRIAL EMPHASIS	732,080	755,234	1,147,055	1,322,117	1,052,368
DUAL EMPHASIS	2,652,981	2,499,820	1,943,188	2,043,805	1,751,069
TOTAL	6,051,559	5,731,840	6,200,716	6,878,716	7,024,762

PERCENTAGE OF TOTAL SALES REPRESENTED BY EACH GROUP

SURVEY YEAR	1980	1981	1982	1983	1984
PRINTING EMPHASIS	44.06%	43.21%	50.16%	51.06%	60.09%
INDUSTRIAL EMPHASIS	12.10	13.18	18.50	19.22	14.98
DUAL EMPHASIS	43.84	43.61	31.34	29.71	24.92
TOTAL	100.00	100.00	100.00	100.00	100.00

APPENDIX B

SURVEY METHODOLOGY

For 1976 and prior years, the NPTA Survey results published in Paper Merchant Performance were developed from data submitted by the member firms to Price Waterhouse & Company. Price Waterhouse accumulated this financial information and submitted "summary totals" and "certain averages" to NPTA. The summary data were grouped and developed by NPTA. (See page 68 of the 1977 edition of Paper Merchant Performance for details.)

For 1977-1984, all data were submitted to Management Foresight, Inc. (MFI) of Columbus, Ohio; MFI calculated all results.

When there is a change from one survey approach to another, there are potential continuity problems. Therefore, the remainder of the appendix will discuss the 1977-1984 methodology in some detail and, as appropriate, the methodology used in earlier years.

CALCULATION APPROACHES

In 1977-1984, medians, quartiles, and composite averages were used as statistical measures. Most of the results in the Exhibits which form the basis for most of the discussion in the main body of the report are composite averages. Most of the results in the supplementary tables of this report and of the individual PAR Reports are presented as medians.

COMPOSITE AVERAGES

A composite average is an excellent measure of how a group of firms is doing as a whole. It is calculated by first adding together all appropriate dollar values or other values such as number of people and then calculating the ratio or performance measure. For example, to calculate the composite average Net Profit Before Taxes to Net Sales for All Paper Merchant Firms in Exhibit 2, the Net Profit Before Taxes for all firms were added together, the Net Sales for all firms were added together, and the following calculation was made:

$$\frac{\text{NET PROFIT BEFORE TAXES}}{\text{NET SALES}} = \frac{\text{Total NET PROFIT BEFORE TAXES for All Firms in the Survey}}{\text{Total NET SALES for All Firms}}$$

As an example, the 1977 dollar values are shown below:

$$\frac{\text{Total NET PROFIT BEFORE TAXES for All Firms}}{\text{Total NET SALES for All Firms}} = \frac{\$\ 99,348,500}{3,763,119,920} = 2.64\%$$

If a firm did not supply all of the data needed for a particular calculation, then none of its data were used to develop the industry totals for that particular measure (if it supplied the needed data for other measures, then its data would be used to calculate those measures).

MEDIAN AND QUARTILE VALUES

Three values are generally reported for each performance measure in the PAR Reports. They are the upper quartile value -- the median figure -- and the lower quartile value. The results presented in Tables 1 through 6 of this report are generally medians.

For any given performance measure, these three figures are calculated by, first, arraying (or arranging) all the numerical values of the performance measure as calculated for each firm in numerical order from the strongest to the weakest. The figure that falls in the middle of the array, or the listing of values, is the median. One-half of the firms had stronger performance and one-half of the firms had weaker performance.

The word "Quartile" implies that something is broken down into quarter segments. The upper quartile value is the figure one-quarter of the way down from the very strongest number. Or, it is the figure halfway between the very strongest and the median value. The lower quartile figure would be the value one-quarter up from the very weakest ratio. It is the figure halfway between the median and the weakest value.

The presentation and use of median-quartile values minimizes the distortion caused by one firm reporting a very unusual value for a performance measure due to a mistake or because of some special circumstances. For example, a new firm that had sustained several years of losses might have a very small owners's equity--say $10. If the firm recovered and acheived a profit of, say $100,000, the calculated return on net worth would be $100,000/$10, or 1,000,000%. Thus, an average type of summary measure could be seriously distorted. The methodology of identifying the median is, on the other hand, not as sensitive to such unusual figures; it treats an unusually large quantity the same as it treats any other figure above the median. For most applications, this results in more meaningful comparative values.

In addition, the median value is more representative of how individual firms (or division) have performed. While a composite average is dominated by the results of the larger firms, large and small firms have the same influence on a median. Therefore, it is desirable to examine both the median and the composite average for important performance measures.

Because of the approach used, the firm whose performance was the median for one performance measure may be, and probably is, different than the firm which was the median for another measure. This occurs because all of the values are resorted and independent medians and quartiles are calculated for each performance measure. Thus, there is no single upper quartile firm -- or median firm -- or lower quartile firm in this report.

For 1977 and 1978, firms were asked to report for their operations in each of the six NPTA Regions. Thus, a firm with operations in only one region submitted one survey form. A firm with operations in two, or more, NPTA regions submitted either one form for all its operations, or individual forms for its regional operations. In 1979, firms were allowed to report on a branch basis if complete branch data could be provided. Since 1979, there have been seven NPTA Regions.

THE ORGANIZATION OF INFORMATION

This survey sets up three major groups of firms by commodity line:

GROUP I: PRINTING PAPER MERCHANTS takes together all firms obtaining 80%, or more, of their total sales from the sale of printing papers.

GROUP II: INDUSTRIAL PAPER MERCHANTS takes together all firms obtaining 80%, or more, of their total sales from the sale of industrial papers.

GROUP III: DUAL PAPER MERCHANTS takes together all firms obtaining less than 80% of their total sales from the sale of either printing or industrial papers.

Groups One, Two and Three were sorted into five subgroups.

GROUP I - PRINTING PAPER MERCHANTS

The Printing Paper Merchant firms were sorted into five types of subgroups:

1. One (1) All Reporting Printing Paper Emphasis Firms Group

2. Eight (8) NPTA Geographic Regions Groups

3. Four (4) Sales Volume Groups
   Under $8.0 Million in Sales
   $8.0 - 15 Million in Sales
   $15 - 50 Million in Sales
   Over $50 Million in Sales

4. Three (3) Return On Total Assets (ROTA) Groups. The printing paper firms were sorted into three profitability groups based upon their return before taxes on total assets. In effect, each performance measure is shown as a median value for the top 25% of the printing paper firms in terms of profitability, for the middle 50% and for the bottom 25%. (ROTA sorting is discussed later in this appendix.)

5. Four (4) Warehouse-Indirect-Direct Sales Path Groupings. The printing paper firms were sorted into four sales paths because many performance measures differ significantly depending on warehouse-indirect-direct sales mixes. The following criteria produced subgroups of approximately the same size.

Over 65%	Direct Sales
35-55%	Warehouse and Indirect Sales
55-75%	Warehouse and Indirect Sales
75% or More	Warehouse and Indirect Sales

GROUP II - INDUSTRIAL PAPER MERCHANTS

The Industrial Paper Merchants were sorted into five types of subgroups:

1. One (1) All Reporting Industrial Paper Emphasis Firms Group

2. Eight (8) NPTA Geographic Regional Groups

3. Five (5) Sales Volume Groups
   - Under $3.0 Million in Sales
   - $3.0 - 6.0 Million in Sales
   - $6.0 - 12 Million in Sales
   - $12 - $25 Million in Sales
   - Over $25 Million in Sales

4. Three (3) Return On Total Assets (ROTA) Groups. The industrial paper firms were similarly sorted into their own profitability groups based upon the return on assets of the top 25%, middle 50%, and lower 25% of the reporting industrial merchant firms.

5. Three (3) Warehouse-Indirect Sales Path Groupings. The industrial paper firms were sorted into three warehouse-indirect sales emphasis groupings.

Under 75%	Warehouse and Indirect Sales
75% to 90%	Warehouse and Indirect Sales
90% and Over	Warehouse and Indirect Sales

GROUP III- DUAL PAPER MERCHANTS

The Dual Paper Merchants were sorted into five subgroups:

1. One (1) All Dual Paper Merchant Firms

2. Eight (8) NPTA Geographic Regional Groups

3. Four (4) Sales Volume Groups
   - $Under $10 Million in Sales
   - $10 - 25 Million in Sales
   - $25 - 65 Million in Sales
   - Over $65 Million in Sales

4. Three (3) Return On Total Assets (ROTA) Groups.

5. Three (3) Warehouse-Indirect Sales Emphasis Groups

Under 65%	Warehouse and Indirect Sales
65 - 80%	Warehouse and Indirect Sales
Over 80%	Warehouse and Indirect Sales

RETURN ON TOTAL ASSET (ROTA) GROUPS

Return On Total Assets (ROTA) is an excellent measure of operational performance because it combines measures of profitability, i.e., Net Profit Margin, and asset management, viz., Total Asset Turnover:

Return On Total Assets = Net Profit Margin x Total Asset Turnover

$$\frac{\text{Net Profit Before Taxes}}{\text{Total Assets}} = \frac{\text{Net Profit Before Taxes}}{\text{Net Sales}} \times \frac{\text{Net Sales}}{\text{Total Assets}}$$

Firms are separated into three ROTA subgroups, representing high, middle, and low returns on total assets values, and the various performance measures are computed for each ROTA group. The discussion below and Figure 1 to the right explain how these ROTA Group measures are developed.

Firstly, calculate ROTA for each firm. (Step 1.) Secondly, arrange the ROTA values for the firms in order from highest to lowest. (Step 2.) In the example in Figure 1, the highest ROTA acheived by any firm was 22.38%, while the lowest was -8.69%. The sorting process shown in Figure 1 assumes that there are 60 firms in the sample. Three ROTA groups are defined using the upper and lower quartile values as the cutoff points. (Step 3.)

	Number of Firms in Groups	Ranges of ROTA Values for Firms in Groups
High ROTA Groups	15	10.69% to 22.38%
Middle ROTA Groups	30	3.53% to 10.69%
Low ROTA Groups	15	-8.68% to 3.53%

These three groups of firms remain fixed for all following calculations.

After establishing the three ROTA groups, the median for each performance measure is calculated for each group. For example, the Gross Profit Margin (%) of each firm in each group is calculated. (Step 4.) Then the Gross Profit Margin (%) values are arranged in order from highest to lowest within each group. (Step 5.) The median value is selected in each of the three groups. (Step 6.) These three median values are reported as the representative performance of each of the three ROTA groups. The determination of the median of the high ROTA group is illustrated in the figure.

The procedure in Steps 4, 5, and 6 is repeated for each performance measure for each major product emphasis group. Thus, if there are 300 performance measures in the survey, the calculation, rank ordering and median selection process would be repeated 900 times for each group to produce the median values for the three ROTA groups.

The ROTA group data are usually valuable because they reflect the different operating policies and performance levels of the low, middle, and high profit firms in a major group. ROTA group data should not be the sole basis for major policy changes, but they usually identify areas that should be explored more carefully.

FIGURE 1: DEVELOPMENT OF ROTA GROUP DATA

STEP 1 Calculate ROTA for each firm:

$$\text{ROTA} = \frac{\text{Net Profit Before Taxes}}{\text{Total Assets}} = \frac{\$70,000}{\$1,000,000} = 7.00\%$$

STEP 2 Arrange the firms' ROTA values from highest to lowest as illustrated below to the right.

STEP 3 Separate the firms into 3 groups: a HIGH ROTA GROUP composed of those firms whose ROTAs were above the industry upper quartile ROTA value (10.69% in this case); a LOW ROTA GROUP composed of those firms whose ROTAs were below the industry lower quartile ROTA value (3.53%); and a MIDDLE ROTA GROUP composed of those firms whose ROTAs were between the two quartile values (Between 3.53% and 10.69%).

STEP 4 Within each of the 3 ROTA GROUPS, calculate each performance measure.

STEP 5 Arrange the results from high to low in each of the 3 groups for each measure.

STEP 6 Determine the median value for each measure in each ROTA group. This value is published as the representative performance measure for the group.

ROTA GROUP FIRM ARRAY

	HIGHEST ROTA:	22.38%
HIGH ROTA GROUP		.
		.
		.
		.
		.
	UPPER QUARTILE:	10.69%
MIDDLE ROTA GROUP		.
		.
		.
		.
		.
		.
	MEDIAN	6.83%
		.
		.
		.
		.
		.
		.
		.
		.
	LOWER QUARTILE:	3.53%
LOW ROTA GROUP		.
		.
		.
		.
		.
	LOWEST ROTA:	-8.69%

ILLUSTRATION OF THE MEDIAN OF THE HIGH ROTA GROUP

	High ROTA Group
The Highest ROTA	22.38%
	.
	.
THE MEDIAN OF HIGH ROTA GROUP	15.21%
	.
	.
The Upper Quartile ROTA	10.69%

APPENDIX C

MFI PROFIT MODEL

The profit model summarizes a firm's, or an industry's, performance in three key management areas: sales profit margin management, asset management and financial position management. The model actually proceeds in two phases. Firstly, the return on sales and the asset turnover are multiplied for the return on assets. The product of this multiplication is also known as the measure Return On Total Assets (ROTA).

$$\frac{\text{Net Profit Before Taxes}}{\text{Net Sales}} \times \frac{\text{Net Sales}}{\text{Total Assets}} = \frac{\text{Net profit Before Taxes}}{\text{Total Assets}}, \text{ or (ROTA)}$$

Secondly, Return On Total Assets (ROTA) and the leverage multiplier are multiplied for the measure Return On Net Worth (RONW), that is:

ROTA x Financial Leverage Multilpier = RONW

These two phases are customarily run together in summary fasion. We will display the model and substitute values from the financial statements of the fictitious Alpha Paper Company.

Alpha Paper's Data:

Net Sales	=	$10,000,000
Net Profit Before Taxes	=	350,000
Total Assets	=	2,700,000
Total Debt	=	1,350,000
Net Worth	=	1,350,000

Alpha Paper's Profit Model:

Profit Margin On Sales	x	Total Asset Turnover	=	Return On Total Assets	x	Financial Leverage Multiplier	=	Return On Net Worth
Net profit Before Taxes / Net Sales	x	Net Sales / Total Assets	=	Net profit Before Taxes / Total Assets	x	Total Assets / Net Worth	=	Net profit Before Taxes / Net Worth
$ 350,000 / $10,000,000	x	$10,000,000 / $ 2,700,000	=	$ 350,000 / $2,700,000	x	$2,700,000 / $1,350,000	=	$ 350,000 / $1,350,000
3.5%		3.70		12.96%		2.00		25.93%

APPENDIX D

DEFINITIONS OF PERFORMANCE MEASURES*

1. RETURN ON CAPITAL EMPLOYED (%) =

$$\frac{\text{Net Profit Before Taxes} + \text{Interest on Borrowed Capital} - \text{Income from Outside Investments}}{\text{Ending Capital and Surplus}^{**} + \text{Long Term Liabilities} + \text{Bank Loans}^{***} - \text{Outside Investments}}$$

2. NET PROFIT BEFORE TAXES AS % NET WORTH (%) =

$$\frac{\text{Net Profit Before Taxes}}{\text{Ending Capital and Surplus}^{**}}$$

3. TOTAL ASSETS TO NET WORTH (X) =

$$\frac{\text{Ending Total Assets}}{\text{Ending Capital and Surplus}^{**}}$$

4. NET PROFIT BEFORE TAXES AS % TOTAL ASSETS (%) =

$$\frac{\text{Net Profit Before Taxes}}{\text{Ending Total Assets}}$$

5. NET PROFIT BEFORE TAXES AS % NET SALES (%) =

$$\frac{\text{Net Profit Before Taxes as}}{\text{Net Sales}}$$

6. NET PROFIT BEFORE TAXES AS % NET SALES (LIFO ADJ; %) =

$$\frac{\text{Net Profit Before Taxes} + \text{Additions to (Deletions from) LIFO Reserve}}{\text{Net Sales}}$$

7. NET SALES TO TOTAL ASSETS (X) =

$$\frac{\text{Net Sales}}{\text{Ending Total Assets}}$$

8. WHSE PRINT PAPER GROSS MARGIN AS % WHSE PRINT SALES (%) =

$$\frac{\text{Gross Trading Margin on Whse Print Paper Sales}}{\text{Total Whse Print Paper Sales}}$$

9. WHSE & INDIRECT PRINT PAPER GROSS MARGIN AS % WHSE & INDIRECT PRINT PAPER SALES (%) =

$$\frac{\text{Gross Trading Margin on Whse \& Indirect Print Paper Sales}}{\text{Total Whse \& Indirect PP Sls}}$$

10. DIRECT PRINT PAPER GROSS MARGIN AS % DIRECT PRINT PAPER SALES (%) =

$$\frac{\text{Gross Trading Margin on Direct Print Paper Sales}}{\text{Total Direct Print Paper Sales}}$$

11. WHSE INDUSTRIAL PAPER GROSS MARGIN AS % WHSE INDUSTRIAL PAPER SALES (%) =

$$\frac{\text{Gross Trading Margin on Whse Industrial Paper Sales}}{\text{Total Whse IP Sales}}$$

*See the survey questionnaire for definitions of data inputs to these measures.
**Capital and Surplus = Common Equity = Net Worth.
***Bank Loans Due in Less Than One Year was added to the denominator in 1978.

12.	WHSE & INDIRECT INDUSTRIAL PAPER GROSS MARGIN AS % WHSE & INDIRECT IP SALES (%)	=	Gross Trading Margin on Whse & Indirect Industrial Paper Sales / Total Whse & Indirect IP Sales
13.	DIRECT INDUSTRIAL PAPER GROSS MARGIN AS % DIRECT INDUSTRIAL PAPER SALES (%)	=	Gross Trading Margin on Direct Industrial Paper Sales / Total Direct IP Sales
14.	WAREHOUSE & INDIRECT SALES AS % TOTAL SALES (%)	=	Whse & Indirect Sales / Total Net Sales
15.	PERCENT SALES CHANGE OVER PRIOR YEAR (%)	=	1984 Sales - 1983 Sales / 1983 Sales
16.	NET SALES PER EMPLOYEE ($000)	=	Total Net Sales / Av. Total No. of People Employed*
17.	GROSS MARGIN PER EMPLOYEE ($000)	=	Total Gross Margin / Av. Total No. of People Employed*
18.	TOTAL PAYROLL AS % GROSS MARGIN (%)	=	Total Payroll / Total Gross Trading Margin
19.	SALES SERVICE & SELLING EXPENSE AS % GROSS TRADING MARGIN (%)	=	Total Sales Service Expense + Total Selling Expense / Total Gross Trading Margin
20.	TOTAL OPERATING EXPENSES AS % GROSS TRADING MARGIN (%)	=	Total Operating Expenses / Total Gross Trading Margin
21.	PRINT PAPER INVENTORY TURNOVER (WHSE ONLY; %)**	=	Total Whse Print Paper Cost of Goods Sold / [Beginning of PP Inventory + Ending PP Inventory] / 2
22.	GROSS MARGIN RETURN ON ON PRINT PAPER INVENTORY (WHSE ONLY; %)**	=	Total Whse Print Paper Gross Trading Margin / [Beginning of Print Paper + Ending PP Inventory] / 2
23.	INDUSTRIAL PAPER INVENTORY TURNOVER (WHSE ONLY; X)**	=	Total Whse Industrial Paper Cost of Goods Sold / [Beginning IP Inventory + Ending IP Inventory] / 2
24.	GROSS MARGIN RETURN ON INDUSTRIAL PAPER INVENTORY (WHSE ONLY; %)**	=	Total Whse Industrial Paper Gross Trading Margin / [Beginning IP Inventory + Ending IP Inventory] / 2
25.	DAYS SALES IN ACCOUNTS RECEIVABLE ON NOVEMBER 30 (DAYS)	=	[Trade Notes & Accounts Receivable on Nov. 30, 1984] x 61 / Credit Sales for Oct. & Nov., 1984

*See survey questionnaire for a definition of total personnel.
**Indirect sales were excluded from warehouse sales for 1978-81 but not for 1977.

APPENDIX E

MAJOR CHANGES IN THE NPTA/MFI SURVEY

RECOGNITION OF INDIRECT SALES IN THE 1978 AND LATER SURVEYS

A major change was made in the NPTA Survey starting with the 1978 data year. A new category of sales, namely, indirect sales was indentified.

The Survey Form asked the participants to identify warehouse, indirect and direct sales of both printing and industrial type papers separately. The reason for this modification is that indirect sales (also called special order or in-and-out sales) have revenue and expense factors that are different from those of warehouse sales. In addition, indirect sales can have a major impact on areas such as inventory turnover. If indirect sales are counted as straight warehouse sales, they can result in a misleadingly high value for inventory turnover and a perhaps misleadingly low value for warehouse expenses.

In the company PAR, inventory turnover values were calculated both including and excluding indirect sales. In Paper Merchant Performance, only the "warehouse only" inventory turnover measure is presented in the exhibits and tables. However, other measures are discussed in the text as appropriate.

As shown below for the 1978 Survey, only about half the survey forms included warehouse and indirect sales data:

	Number of Forms Reporting Data			
	Printing	Industrial	Dual	Total
Both Warehouse and indirect Sales Data Supplied Separately	42	32	33	107
Only Total Warehouse and Indirect Sales Data Supplied	75	78	55	208

The same pattern holds for gross profit data. Thus, the more detailed "warehouse" and "indirect" sales based measures related to sales mix, gross margin, and inventory turnover should be used with care.

LIFO ADJUSTMENTS IN THE 1978 AND LATER SURVEYS

First, the LIFO method inventory valuation can create significant distortions in various performance measures, such as gross margin, net profit margin, and inventory. In response to this problem, a number of new measures that adjust for the LIFO reserve and thus put everyone on an equal reporting basis have been added to the PAR. A thorough discussion of just how this was done is outlined in Appendix F.

In addition to all the new adjusted measures, there were two calculation changes. They are:

Net Profit Before Tax -- % Total Assets (adj.)
Net Profit Before Tax -- % Net Worth (adj.)

The total amount of ending LIFO reserve was added to ending assets and ending net worth for the calculation of both of these measures. This is discussed in Appendix F.

INVENTORY IN THE 1978 AND LATER SURVEYS

Another improvement in 1978 appearing in the company PAR was the use of average monthly inventory in calculating a number of new inventory management measures. Because inventories tend to fluctuate during the year due to the seasonable nature of business, the use of an average monthly figure is often more accurate in determining turnover than using the average of beginning and ending inventories.

One of the more significant inventory measures is the Turn and Earn Profitability Index. Turn & Earn is a combined inventory and gross margin performance measure. It is a product of Gross Margin Percent On Sales and physical Inventory Turnover (rather than Warehouse Sales To Inventory) as follows:

$$\text{Turn \& Earn Profitability Index} = \frac{\text{Gross Margin on Warehouse (and Indirect) Sales}}{\text{Whse (and Indirect) Sales}} \times \frac{\text{Warehouse (and Indirect) Cost of Goods Sold}}{\text{Average (Monthly) Inventory}}$$

$$= \text{Gross Margin \% On Whse (and Indirect) Sales} \times \text{Inventory Turnover Ratio}$$

$$= \text{"EARN"} \times \text{"TURN"}$$

Here, also, inventory is assumed to support warehouse and indirect sales. Therefore, warehouse and indirect gross profit and warehouse and indirect sales are used in the calculation.

The T&E Profitability Index can be used to obtain a first approximation of the profitability of carrying different product lines. Even though it does not consider differences in operating expenses or the other-than-inventory investment requirements associated with competing product lines, it usually provides considerable insight into the relative profitability of handling different product lines.

For the most part, these more refined measures appear in the company PARs received by individual firms but are not included in the Paper Merchant Performance.

ADDITIONS APPEARING IN COMPANY PARS INTRODUCED WITH THE STUDY OF 1980 DATA

ASSET MANAGEMENT

1. AVERAGE NUMBER OF YEARS ON LIFO
2. DAYS SALES IN AVERAGE MONTHLY IP (or PP) INVENTORY
3. AVERAGE COLLECTION PERIOD (AVERAGE MONTHLY A/R; DAYS)
4. AVERAGE MONTHLY ACCOUNTS RECEIVABLE TURNOVER (X)
5. RETURN ON AVERAGE MONTHLY ACCOUNTS RECEIVABLE INVESTMENT
6. AVERAGE PAYMENT PERIOD (AVERAGE MONTHLY ACCOUNTS PAYABLE)

WAREHOUSE ONLY

7. COST OF WAREHOUSE GOODS SOLD/AVERAGE INVENTORY (X)
8. WAREHOUSE GROSS MARGIN RETURN ON AVERAGE INVENTORY (%)
9. TURN & EARN PROFITABILITY INDEX (WHSE;%)

WAREHOUSE & INDIRECT

10. COST OF WAREHOUSE & INDIRECT GOODS SOLD/AVERAGE INVENTORY (X)
11. WAREHOUSE & INDIRECT GROSS MARGIN RETURN ON AVERAGE INVENTORY (%)
12. TURN & EARN PROFITABILITY INDEX (WAREHOUSE & INDIRECT;%)
    (In the past, all the above measures have been provided on a non-LIFO basis; that is, all firms adjusted to a FIFO basis. This year the above measures have been added, which mix data on both LIFO and FIFO bases, allowing you to make comparisons.)

OTHER MEASURES

13. NET SALES TO TOTAL ASSETS (ADJ; X)
14. TOTAL ASSETS TO NET WORTH (ADJ; X)
    (These well-known measures have been calculated on a non-LIFO basis. "Adj" means LIFO firms have been adjusted to a FIFO basis and then all firms considered together. The amount of your ending LIFO reserve is added to both Assets and Net Worth before the calculation is done.)

15. CASH DISCOUNTS TAKEN -- % CASH DISCOUNTS GIVEN (%)
16. CASH & CARRY RETAIL SALES AND BACKHAUL REVENUE DETAIL
17. TOTAL OPERATING EXPENSE PER EMPLOYEE ($000)
18. FRINGE BENEFITS PER EMPLOYEE ($000)
19. NET EDP EXPENSE -- % NET SALES

CONFIDENTIAL MEASURES

20. COMPENSATION OF HIGHEST (EXCL SALESMEN; $000)
21. COMPENSATION OF HIGHEST PAID (EXCL SALESMEN -- % SALES)
22. COMPENSATION OF 2ND HIGHEST PAID (EXCL SALESMEN; $000)
23. COMPENSATION OF 2ND HIGHEST PAID (EXCL SALESMEN -- % SALES)
24. COMPENSATION OF 3RD HIGHEST PAID (EXCL SALESMEN; $000)
25. COMPENSATION OF 3RD HIGHEST PAID (EXCL SALESMEN -- % SALES)

ADDITIONS APPEARING IN COMPANY PARS INTRODUCED WITH THE STUDY OF 1981 DATA

Some seventy new measures were added to the survey of 1981 data as reported in the company PARs. The major expansion was the inclusion of market analysis information.

PRINTING PAPER COMMODITY CLASSES:
- FREE SHEET, C-2-S (%)
- BUSINESS PAPERS, SULPHITE/SULPHATE (%)
- FREE SHEET, UNCOATED (%)
- GROUNDWOOD, C-2-S (%)
- BLEACHED BRISTOL (%)
- BUSINESS PAPERS, COTTON FIBER (%)
- OTHER (%)
- TOTAL, PRINT PAPER COMMODITY CLASSES

PRINTING PAPER CUSTOMER CLASSES:
- COMMERCIAL PRINTERS (%)
- INPLANT PRINTERS (%)
- QUICK COPIERS (%)
- BUSINESS FORMS MANUFACTURERS (%)
- BUSINESS OFFICE BUYERS (%)
- BOOK PUBLISHERS (%)
- GOVERNMENTAL AGENCIES (%)
- OTHER (%)
- TOTAL, PRINT PAPER CUSTOMER CLASSES

INDUSTRIAL PAPER COMMODITY CLASSES:
- SANITARY PAPERS & PERS SERV DISPOS (%)
- FOOD SERVICE DISPOSABLES (%)
- IND PACKAGING SUPPLIES & EQUIP (%)
- JANITORIAL SUPPLIES & EQUIP (%)
- RETAIL/MATCHED PACKAGING (%)
- HEALTH CARE DISPOSABLES (%)
- OTHER (%)
- TOTAL, INDUSTRIAL COMMODITY CLASSES

INDUSTRIAL PAPER CUSTOMER CLASSES:
- FOOD & FOOD SERVICES (%)
- FAST FOOD OUTLETS (%)
- HEALTH CARE INSTITUTIONS (%)
- INDUSTRIAL MANUFACTURERS (%)
- PUBLIC INSTITUTIONS (%)
- (OTHER) RETAIL BUSINESS (%)
- (OTHER) SERVICE INDUSTRIES (%)
- OTHER (%)
- TOTAL, INDUSTRIAL CUSTOMER CLASSES

ADDITIONS APPEARING IN COMPANY PARS INTRODUCED WITH THE STUDY OF 1984 DATA

1. GROSS MARGIN PER ORDER (In $, Non-LIFO, Whse/Indir./Whse.&Indir.)

2. GROSS MARGIN PER INVOICE LINE (In $, Non-LIFO, Whse/Indir./Whse.&Indir.)

APPENDIX F

PERFORMANCE MEASURES ADJUSTED FOR LIFO ACCOUNTING

In periods of inflation, the use of a LIFO inventory valuation approach will typically reduce a firm's ending inventory valuation and, thus, also reduce its reported gross profit and net profit before taxes. An increasing number of firms are willing to accept lower accounting profits in order to reduce their taxes and increase their after tax cash flow. Other firms, for a variety good and sufficient reasons, choose to remain on FIFO or a similar approach.

In order to increase the comparability of the performance measures calculated for LIFO and non-LIFO firms, the LIFO reserves of the LIFO firms are added back to their reported gross profit, net profit, inventory, and other values as appropriate and "LIFO adjusted" measures are calculated. These adjusted measures are then integrated with the unadjusted measures of the non-LIFO (FIFO) firms and new, more comparable performance measures are calculated.

The approach used to calculate the "LIFO adjusted" measures for a typical LIFO firm is illustrated in Tables 1 and 2. Table 1 shows data that a typical firm on LIFO might have reported on its Survey Form (Column A); the "LIFO Adjustments" that would have been made by MFI (Column B); and the firm income statement and balance sheet data "as adjusted" (Column C).

The "as reported" data from Table 1, Column A are used to calculate the unadjusted performance measures shown in Table 2, Column D. The "LIFO Adjusted" performance measures shown in Table 2, Column E are calculated from the "as adjusted" data shown in Table 1, Column C. As discussed above, the "as adjusted" measures for the LIFO firms are combined with unadjusted data from the other participating firms to calculate the various "LIFO adjusted" industry performance measures shown in your company PAR.

TABLE 1
ADJUSTING FOR LIFO INVENTORY VALUATIONS
(Adjustments made before LIFO adjusted performance measures are calculated)

	TYPICAL LIFO FIRM DATA		
	Firm Data As Reported (A)	LIFO Adjustment (B)	Firm Data As LIFO Adjusted (C)
INCOME STATEMENT			
Net Sales	$15,000,000	0	$15,000,000
Cost of Goods Sold	13,464,000	-$90,000[1]	13,374,000
Gross Trading Margin	$ 1,536,000	+$90,000	$ 1,626,000
Net Profit Before Taxes	$ 206,000	+$90,000	$ 296,000
WAREHOUSE SALES & GROSS MARGIN			
Warehouse Sales	$ 8,000,000		$ 8,000,000
Warehouse Cost of Goods Sold	6,800,000	-$90,000	6,710,000
Warehouse Gross Margin	$ 1,200,000	+$90,000	$ 1,290,000
WAREHOUSE & INDIRECT SALES AND GROSS MARGIN			
W&I[2] Sales	$10,000,000		$10,000,000
W&I Cost of Goods Sold	7,900,000	-$90,000	7,810,000
W&I Gross Margin	$ 2,100,000		$ 2,190,000
ASSET ITEMS			
Accounts Receivable	$ 1,560,000	---	$ 1,560,000
Inventory (Beginning)	$ 1,300,000	+$180,000	$ 1,480,000
Inventory (Ending)	$ 1,740,000	+$270,000	$ 2,010,000
Inventory (Average)	$ 1,520,000	+$225,000	$ 1,745,000
Total Current Assets	$ 3,500,000	+$270,000	$ 3,770,000
Total Assets	$ 3,800,000	+$270,000	$ 4,070,000
LIABILITY & NET WORTH ITEMS			
Total Debt	$ 2,100,000	---	$ 2,100,000
Net Worth	$ 1,700,000	+$270,000	$ 1,970,000
LIFO RESERVES			
Beginning LIFO Reserve	$ 180,000		
Additions to LIFO Reserve	$ 90,000		
Ending LIFO Reserve	$ 270,000		

[1]All adjustments in this column are developed from the "LIFO Reserve" data appearing at the bottom of Column A.
[2]W&I = Warehouse & Indirect.

TABLE 2

LIFO ADJUSTED PERFORMANCE MEASURES
(All dollar values in thousands of dollars)

	(D) UNADJUSTED CALCULATION[1]	(E) LIFO ADJUSTED CALCULATION[2]
PROFITABILITY PERFORMANCE MEASURES		
Gross Margin / Net Sales	$ 1,536 / $15,000 = 10.24%	$1,536 + $90 / $15,000 = 10.84%
Gross Margin on Whse Sales / Whse Sales	$ 1,200 / $ 8,000 = 15.00%	$1,200 + $90 / $8,000 = 16.13%
Gross Margin on W&I Sales / Warehouse & Indirect Sales	$ 2,100 / $10,000 = 21.00%	$2,100 + $90 / $10,000 = 21.90%
Net Profit Before Taxes / Net Sales	$ 206 / $15,000 = 1.37%	$ 206 + $90 / $15,000 = 1.97%
Net Profit Before Taxes / Total Assets	$ 206 / $ 3,800 = 5.42%	$ 206 + $90 / $3,800 + $270 = 7.27%
Net Profit Before Taxes / Net Worth	$ 206 / $ 1,700 = 12.12%	$ 206 + $90 / $1,700 + $270 = 15.03%
LIFO INVENTORY USE		
Ending LIFO Reserve to Ending Inventory	$ 270 / $ 1,740 = 15.52%	
Additions to LIFO Reserve As % Net Profit Before Taxes	$ 90 / $ 206 = 43.69%	
Additions to LIFO Reserve As % Net Sales	$ 90 / $15,000 = .60%	
INVENTORY MANAGEMENT MEASURES		
Cost Whse Goods Sold / Avg Inventory	$ 6,800 / $ 1,520 = 4.47x	$6,800 - $90 / $1,745 = 3.85x
Whse Gross Margin[3] / Return on Avg Inventory	$ 1,200 / $ 1,520 = 78.95%	$1,200 + $90 / $1,745 = 73.93%
Turn & Earn Profitability Index[4]	15.00% x 4.47 = 67.11%	16.13% x 3.85 = 62.01%

[1](Based on data as reported) and shown in Table 1, Column A.
[2](Based on LIFO firm data with LIFO additions or reserves added back as appropriate) as shown in Table 1, Column C.
[3]Warehouse Gross Profit divided by Average Inventory
[4]"Warehouse Gross Margin (%)" times "Cost of Warehouse Goods Sold to Average Inventory"

TABLE 2 (CON'T)

LIFO ADJUSTED PERFORMANCE MEASURES
(All dollar values in thousands of dollars)

	(D) UNADJUSTED CALCULATION[1]	(E) LIFO ADJUSTED CALCULATION[2]
Cost of Goods Sold / Average Inventory	$\frac{\$7,900}{\$1,520} = 5.20x$	$\frac{\$7,900 - \$90}{\$1,745} = 4.48x$
W&I Gross Margin Return on Avg Inventory	$\frac{\$2,100}{\$1,520} = 138.16\%$	$\frac{\$2,100 + \$90}{\$1,745} = 125.5\%$
Turn & Earn Index (W&I)	21.00% x 5.20 = 109.2%	21.9% x 4.48 = 91.11%
ACCOUNTS RECEIVABLE MGT MEASURES		
Gross Margin Return on Accounts Receivable[3]	$\frac{\$1,536}{\$1,560} = 98.46\%$	$\frac{\$1,536 + \$90}{\$1,560} = 104.23\%$
Whse Gross Margin Return on Accounts Receivable[4]	$15.00\% \times \frac{\$15,000}{\$\ 1,560} = 144.23\%$	$16.13\% \times \frac{\$15,000}{\$\ 1,560} = 155.10\%$

[1](Based on data as reported) and shown in Table 1, Column A.
[2](Based on LIFO firm data with LIFO additions or reserves added back as appropriate) as shown in Table 1, Column C.
[3]Total Gross Profit divided by Ending Accounts Receivable
[4]Warehouse Gross Margin (%) times "Total Sales divided by Ending Accounts Receivable"